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ON SIGNIFICANT DISTORTIONS IN THE ECONOMY OF THE PEOPLE'S REPUBLIC OF CHINA FOR THE PURPOSES OF TRADE DEFENCE INVESTIGATIONS

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1. INTRODUCTION

This Report has been prepared by the Commission Services for the purposes of point (c) of Article 2 (6a) of Regulation (EU) 2016/1036 of the European Parliament and the Council of 8 June 2016 on protection against dumped imports from countries not members of the European Union (*'Basic Regulation'* or *'Regulation'*)[1].

Point (c) stipulates:

> *Where the Commission has well-founded indications of the possible existence of significant distortions as referred to in point (b) in a certain country or a certain sector in that country, and where appropriate for the effective application of this Regulation, the Commission shall produce, make public and regularly update a report describing the market circumstances referred to in point (b) in that country or sector. Such reports and the evidence on which they are based shall be placed on the file of any investigation relating to that country or sector. Interested parties shall have ample opportunity to rebut, supplement, comment or rely on the report and the evidence on which it is based in each investigation in which such report or evidence is used. In assessing the existence of significant distortions, the Commission shall take into account all the relevant evidence that is on the investigation file.*

The Basic Regulation defines in point (b) of Article 2(6a) 'significant distortions' as follows:

> *Significant distortions are those distortions which occur when reported prices or costs, including the costs of raw materials and energy, are not the result of free market forces because they are affected by substantial government intervention. In assessing the existence of significant distortions regard shall be had, inter alia, to the potential impact of one or more of the following elements:*
>
> - *the market in question being served to a significant extent by enterprises which operate under the ownership, control or policy supervision or guidance of the authorities of the exporting country;*
> - *State presence in firms allowing the State to interfere with respect to prices or costs;*
> - *public policies or measures discriminating in favour of domestic suppliers or otherwise influencing free market forces;*
> - *the lack, discriminatory application or inadequate enforcement of bankruptcy, corporate or property laws;*
> - *wage costs being distorted;*
> - *access to finance granted by institutions which implement public policy objectives or otherwise not acting independently of the State.*

[1] OJ L 176, 30.06.2016, p.21.

This report examines the existence of significant distortions in the People's Republic of China ('*PRC*' or '*China*') that are relevant under the Basic Regulation. It comprehensively approaches this topic from three different angles.

First, it examines the core features that give the Chinese economy its current shape and structure (Chapters 2 to 8). These include the very concept of a 'socialist market economy' as embodied in the Constitution of the PRC ('*Constitution*')[2] and other laws, the role of the Chinese Communist Party ('*CCP*' or '*Party*') in relation to the economy, the extensive system of plans issued and followed up by various levels of government under the leadership of the CCP, the State-owned sector with its numerous state-owned enterprises ('*SOEs*') including the various supervision and control mechanisms, the financial market, the procurement market and the system of investment screening. All these topics are closely interlinked.

The evidence relates to the framework in which economic activity takes place in China, where the State continues to exert a decisive influence on the allocation of resources and on their prices.

The second part (Chapters 9 to 13) covers various factors of production. It looks in detail into the provision of land, energy, capital, material inputs (e.g. raw materials) and labour in China. The approach here is horizontal, focusing on the overall situation in China with regard to these factors of production.

The evidence relates to the allocation and the pricing of the factors of production influenced by the State in a very significant manner.

The third part (Chapters 14 to 22) examines a number of sectors. These include steel, aluminium, chemicals, ceramics, telecommunications, semiconductors, railway equipment, environmental goods and new energy vehicles. The sectors have been selected on the basis of a number of criteria, such as their frequent occurrence in the Commission's trade defence investigation practice or for their particular economic or strategic importance. Taking the perspective of individual sectors allows a closer look at the specific rules and dynamics in that sector. The evidence relates to the distortions resulting from the specific features of the Chinese economy and those in relation to the factors of production.

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2 See Section 2.2.1

PART I

CROSS-CUTTING DISTORTIONS

2. SOCIALIST MARKET ECONOMY

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2.1. INTRODUCTION

China's economic system is unique[3], with a particular role of the State and of the CCP (see Chapter 3). The doctrine of social market economy is one of those elements that embodies China's specific socio-economic setup. The basic features of the socialist market economy are dominant State-ownership (see Chapter 5), an extensive and sophisticated economic planning system (see Chapter 4), as well as interventionist industrial policies and a broad array of other tools to pursue political and economic objectives set by the Party.

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[3] See Kennedy, S.; Blanchette, J. (ed.) – *Chinese State Capitalism, Diagnosis and Prognosis* (2021); The Center for Strategic and International Studies ('*CSIS*'), pp. 6-7, 83-84.

Routinely referred to by political leaders and in legislative and policy documents, President Xi captured some of the doctrine's core elements in a 2019 article[4], in particular the central role of CCP:

> [China] *must never copy the models or practices of other countries.* [...] *We must never follow the path of Western 'constitutionalism', 'separation of powers', or 'judicial independence'.*

A more elaborate view of the basic characteristic of the political and economic foundations of nowadays China was presented by the President in 2021[5]:

> *Soon after the founding of New China, our Party put forward the goal of building a modernized socialist country. After 13 five-year plans, we have laid a solid foundation for achieving this goal.* [...]
>
> *The most essential feature of socialism with Chinese characteristics is the leadership of the Communist Party of China.* [...]
>
> *I have said many times that high-ranking cadres must become Marxist politicians, and leading cadres at all levels must become politically aware.* [...] *Economic work has never been abstract and isolated, but concrete and connected. Leading cadres at all levels, especially senior cadres, must base themselves on the overall strategy for the great rejuvenation of the Chinese nation* [...] *and constantly improve* [...] *the implementation of the Party Central Committee's decisions and arrangements.*

2.2. LEGAL FRAMEWORK

The framework for the socialist market economy is laid down in various provisions of the Constitution, as well as in the General Program of the CCP Constitution[6]. These are then further echoed in essential laws, plans and regulations that define the status and guide the conduct of the economic actors in China's market.

2.2.1. THE CONSTITUTION

Four constitutions have been enacted since the PRC was founded, each reflecting the changing political objectives of the CCP[7]. The current Constitution was promulgated in 1982 and has since then been amended on a number of occasions, most recently in 2018[8]. The concept of socialist market economy was first introduced in the 1993 revision. The current version of the Constitution refers several times to various characteristics of the socialist market economy. The

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4 See Xi, J. - *Strengthen the party's leadership over the comprehensive rule of law* (2019), available at: http://www.qstheory.cn/dukan/qs/2019-02/15/c_1124114454.htm (accessed on 9 March 2023). See also Gao, Ch. - Xi: China Must Never Adopt Constitutionalism, Separation of Powers, or Judicial independence (2019), available at: https://thediplomat.com/2019/02/xi-china-must-never-adopt-constitutionalism-separation-of-powers-or-judicial-independence/ (accessed on 9 March 2023).

5 Speech at the Party School, 11 January 2021, available at: http://www.qstheory.cn/dukan/qs/2021-04/30/c_1127390013.htm (accessed on 31 January 2022).

6 Full text of the CCCP Constitution, with amendments adopted during the 19th Party Congress, available at: http://www.xinhuanet.com//politics/19cpcnc/2017-10/28/c_1121870794.htm (accessed on 9 March 2023).

7 Heilmann, S., Rudolf, M. (2017). *The constitution of the party-state*, in Heilmann, S. (Ed.) (2017). *China's Political System.* Lanham, Maryland: Rowman & Littlefield, p. 57.

8 Constitution of the PRC, adopted on 4 December 1982, as amended; available at: http://en.moj.gov.cn/2021-06/22/c_634901.htm (accessed on 9 March 2023).

main political principles and the key elements in relation to the economy are outlined already in the seventh paragraph of the Preamble:

> *China will be in the primary stage of socialism for a long time to come. The basic task of the nation is to concentrate its effort on socialist modernization along the road of Chinese-style socialism. Under the leadership of the CCP and the guidance of Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory and the important thought of Three Represents, the Scientific Outlook on Development and Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Chinese people of all nationalities will continue to adhere to the people's democratic dictatorship and the socialist road, persevere in reform and opening to the outside world, steadily improve socialist institutions, develop the socialist market economy* [...] *to turn China into a socialist country that is prosperous, powerful, democratic and culturally advanced.*

Moreover, according to Article 6 of the Constitution:

> *The basis of the socialist economic system of the People's Republic of China is socialist public ownership of the means of production, namely, ownership by the whole people and collective ownership by the working people. [...]*
>
> *In the primary stage of socialism, the State upholds the basic economic system in which the public ownership is dominant and diverse forms of ownership develop side by side and keeps to the distribution system in which distribution according to work is dominant and diverse modes of distribution coexist.*

Article 6 of the Constitution thus describes the core substantial elements of the socialist market economy doctrine. It does so by, first, confirming that "*socialist public ownership*" remains the basis of China's socialist economic system and, second, by affirming that the State is to uphold the basic economic system in which "*public ownership is dominant and diverse forms of ownership develop side by side*" for as long as China remains in the primary stage of socialism.

The latest revision of Article 15 of the Constitution is particularly telling in this context. Currently, this provision reads as follows:

> *The State practises socialist market economy.*
>
> *The State strengthens economic legislation, improves macro-regulation and control.*
>
> *The State prohibits in accordance with law any organization or individual from disturbing the socio-economic order.*

Prior to that change, the first sentence ("*The State practises socialist market economy*") read: "*The state practices planned economy on the basis of socialist public ownership*". In other words, the legislative history of the Constitution suggests that the socialist market economy is something different from a fully planned economy[9]. At the same time, other provisions of the Constitution such as Article 7 refute this apparent change of dogma:

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9 However, concerning the planning system, see Chapter 4.

The State-owned economy, namely, the socialist economy under ownership by the whole people, is the leading force in the national economy. The State ensures the consolidation and growth of the State-owned economy.

Given the leading role of the State-owned economy, Article 11 explains the role of the non-public sectors as follows:

The non-public sectors of the economy such as the individual and private sectors of the economy, operating within the limits prescribed by law, constitute an important component of the socialist market economy.

The State protects the lawful rights and interests of the non-public sectors of the economy such as the individual and private sectors of the economy. The State encourages, supports and guides the development of the non-public sectors of the economy and, in accordance with law, exercises supervision and control over the non-public sectors of the economy.

Article 7 therefore reaffirms the state-owned economy as the leading force in China's economy (see Section 5.1), while Article 11, on the other hand, recognises the non-public sectors of the economy as an important component (as opposed to the leading force of the state-owned economy), and declares that the State shall protect the lawful rights and interests of the non-public sectors of the economy, as well as encourage and support them[10].

Moreover, the Constitution assigns to the State an interventionist role that goes beyond protecting the rights and interests of the non-public sectors, in that the State shall "*encourage, support and guide*" their development. However, the legal value of the rights assigned to the non-public sectors is limited. Even if Article 131 of the Constitution nominally provides for independent judiciary system, China not only explicitly rejects the Western approach to separation of powers and judicial independence but the CCP retains the express power to interfere[11].

In short, the Constitution makes it clear that China practices a socialist market economy, that the state-owned economy is the leading force of the economy, and that when it comes to the private economy, the State does not limit itself to encouraging and supporting it, but also guides it, much like in a planned economy. As described in the remainder of this Chapter, the State indeed makes extensive use of a variety of instruments – both incentivising and restricting - to guide the economy towards socialist modernisation under the leadership of the CCP.

2.2.2. CONSTITUTION OF THE COMMUNIST PARTY OF CHINA

The General Program of the CCP Constitution, revised most recently at the 19th Party Congress in October 2017[12], reaffirms the socialist market economy as China's economic system and the CCP's leading role:

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10 The 1999 constitutional revision which amended Article 11 recognised for the first time the role of the non-public sectors of the economy. The provision was then further amended in 2004.

11 See Section 3.3.4.

12 CCP Constitution, available at: http://news.xinhuanet.com/english/download/Constitution_of_the_Communist_Party_of_China.pdf (accessed on 9 March 2023).

The Party must carry out fundamental reform of the economic structure that hampers the development of the productive forces, and keep to and improve the socialist market economy; [...]

The CCP shall lead the people in developing the socialist market economy. It shall be firm in consolidating and developing the public sector of the economy and shall remain steadfast in encouraging, supporting, and guiding the development of the non-public sector. It shall give play to the decisive role of market forces in resource allocation and ensure the government plays its role better, and establish a sound system for macroeconomic regulation. The Party shall work to balance urban and rural development, development among regions, economic and social development, relations between humankind and nature, and domestic development and openness to the world. It shall adjust the economic structure, transform the growth model, and advance supply-side structural reform. The Party shall promote the synchronized development of new industrialization, information technology application, urbanization, and agricultural modernization, and shall build a new socialist countryside, take a new path of industrialization with Chinese characteristics, and build China into a country of innovation and a global leader in science and technology.

As such, the CCP is to lead the people in developing the socialist market economy, both with regard to the public sector – which the CCP is to unwaveringly consolidate and develop – and the non-public sector – whose development the CCP is to unswervingly encourage, support and guide. The General Program of the CCP Constitution closely mirrors the relevant provisions of the Constitution, making the roles of the State and Party practically indistinguishable.

While the role of the CCP will be covered in greater detail in Chapter 3, it should be noted that all key policy initiatives stem from the CCP, as well exemplified for instance in the 14th Five Year Plan[13] ('*14th FYP*') (see more in Section 4.2.5), which explicitly lists the leading role of the CCP as the first guiding principle which must be observed against the background of the turbulent development environment in which China finds itself[14]:

The 13th Five Years Plan period [2016-2020] *was the phase of establishing a well-off society in an all-round way. Facing a tangled and complex international situation, and the arduous tasks of reform, development, and stability, and especially the severe shock of the COVID-19 epidemic, the* [CCP] *Central Committee with Comrade Xi Jinping as the core, never forgetting its original intention and remembering its mission, shall unite and lead the entire Party and people of all ethnicities to forge ahead, blaze new trails of innovation, and work with enthusiasm and promise to advance the various undertakings of the Party and the State. Major breakthroughs have been made in comprehensively deepening reforms, major progress has been attained in comprehensively implementing the*

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13 Outline of the PRC 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035, available at: https://cset.georgetown.edu/wp-content/uploads/t0284_14th_Five_Year_Plan_EN.pdf (accessed on 9 March 2023).

14 Part One, Article I, Section 1 and Part One, Article II, Section 2 of the 14th FYP.

rule of law, [...] *the modernization of the country's governance system and governance capacity has accelerated, and the leadership of the CCP and the advantages of the Chinese socialist system have been further demonstrated.*

[...] *Persist in the Party's total leadership. We will adhere to and refine institutional mechanisms for the Party's leadership of economic and social development, adhere to and refine the system of socialism with Chinese characteristics, continue to raise capabilities and standards for implementing the new development concept and constructing the new development pattern, and provide fundamental assurance for achieving high-quality development.*

2.2.3. LAWS, PLANS AND REGULATIONS

Key legislation reflects the language of the Constitution on socialist market economy, sometimes referring directly to it.

2.2.3.1. THE CIVIL CODE

The central piece of legislation regulating essential aspects of relationships between natural and legal persons, the 2020 Civil Code[15], leaves no scope for doubt that the notion of socialist market economy continues to occupy a central place in the legal order of China. Article 1, setting out the purpose of the Code, reads:

This Law is formulated [...] *for the purposes of protecting the lawful rights and interests of the persons of the civil law, regulating civil-law relations, maintaining social and economic order, meet the needs for developing socialism with Chinese characteristics, and carrying forward the core socialist values.*

According to Article 206, which forms part of the section of the Civil Code[16] stipulating the general rules of property rights:

[t]*he State upholds and improves the fundamental socialist economic systems, such as the ownership system under which diverse forms of ownership co-develop with public ownership as the mainstay, the distribution system under which multiple forms of distribution co-exist with distribution according to work as the mainstay, as well as the system of socialist market economy. The State consolidates and develops the public sector of the economy, and encourages, supports, and guides the development of the non-public sector of the economy. The State implements a socialist market economy and protects the equal legal status and development rights of all market participants.*

2.2.3.2. COMPANY LAW

The Company Law[17] provides in Article 1:

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15 Civil Code of the PRC, adopted on 28 May 2020, available at: http://english.www.gov.cn/archive/lawsregulations/202012/31/content_WS5fedad98c6d0f72576943005.html (accessed on 9 March 2023).

16 Book Two, Part One, Chapter I of the Civil Code.

17 Company Law of the PRC of 29 December 1993, as amended, available at: http://mg.mofcom.gov.cn/article/policy/201910/20191002905610.shtml (accessed on 9 March 2023).

The Company Law of the People's Republic of China [...] *has been enacted in order to standardize the organization and activities of companies, protect the lawful rights and interests of companies, shareholders and creditors, safeguard the social and economic order and promote the development of the socialist market economy.*

Existing criminal record for past charges on "*disruption of the order of the socialist market economy*" also features among reasons disqualifying a person from being eligible to hold a function of a company director, supervisor or senior officer[18].

2.2.3.3. LAW ON THE STATE-OWNED ASSETS OF ENTERPRISES

According to Article 1 of the Law on State-Owned Assets of Enterprises ('*SOE Law*')[19]:

This Law is enacted for the purpose of safeguarding the basic economic system of China, consolidating and expanding the State-owned economic sector, strengthening protection of State-owned assets, giving play to the leading role of the State-owned economic sector in the national economy, and promoting the development of the socialist market economy.

The leading role in the economy assigned to the state-owned sector is further elaborated in the remainder of that law, as well as in a series of other legal instruments, for instance the State Assets Supervision and Administration Commission ('*SASAC*') regulation and various guiding opinions (see Chapter 5). Moreover, this legal framework also sets out the tight grip of the State and the CCP over SOEs (see in detail in Chapter 5).

2.2.4. THE 18TH, 19TH AND 20TH PARTY CONGRESS

In November 2013, at the Third Plenum of the 18th Party Congress, the Chinese leadership announced that it would undertake a comprehensive reform programme.

In the Decision of the Central Committee of the CCP on Some Major Issues Concerning Comprehensively Deepening the Reform ('*3rd Plenum Decision*'), leaders stated that "*economic system reform is the focus of deepening the reform comprehensively*" and that "*the underlying issue is how to strike a balance between the role of the government and that of the market, and let the market play the decisive role in allocating resources and let the government play its functions better*"[20].

The 3rd Plenum Decision contained 60 reform proposals, affecting almost all parts of the Chinese economy. It included proposals for the deepening of the reform of the administrative examination and approval system, calling for the elimination of examination and approval in areas where the market can effectively regulate itself.

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18 Article 146(II) of the Company Law.

19 Law of the PRC on State-Owned Assets in Enterprises, adopted on 28 October 2008, available at: http://www.npc.gov.cn/zgrdw/englishnpc/Law/2011-02/15/content_1620615.htm (accessed on 9 March 2023).

20 See Decision of the Central Committee of the CCP on Some Major Issues Concerning Comprehensively Deepening the Reform, adopted on 12 November 2013, available at: http://www.china.org.cn/china/third_plenary_session/2014-01/16/content_31212602.htm (accessed on 9 March 2023).

On the other hand, the 3rd Plenum Decision reaffirmed that "*the basic economic system with public ownership playing a dominant role and different economic sectors developing side by side is an important pillar of the socialist system with Chinese characteristics and is the foundation of the socialist market economy*", as well as that "[t]*o comprehensively deepen the reform, we must strengthen and improve the party's leadership, give full play to the party's core leadership role in overseeing the overall situation and coordinating all parties,* [...], *improve the party's leadership and governance capabilities, and ensure that the reform was a success*". While this apparent contradiction could be interpreted in a number of ways, subsequent developments (see Section 2.2.2) demonstrated that despite the promise of market-oriented reforms, the basis – a dominant role of state ownership and strong role of the Party leadership in shaping the overall economic development– would remain the default principle.

Indeed, the strengthening of the role of the Party's leadership was one of the main outcomes of the 19th Party Congress in October 2017. President Xi's work report, as well as his speech during the 19th Party Congress, reiterated the leadership of the Party over '*all work*'.[21]

The work report further reaffirmed the role of the State in shaping both the public and non-public sector[22]:

> We must uphold and improve China's basic socialist economic system and socialist distribution system. There must be no irresolution about working to consolidate and develop the public sector; and there must be no irresolution about working to encourage, support, and guide the development of the non-public sector.

Moreover, the speech proclaimed the goal to "*turn Chinese enterprises into world-class, globally competitive firms*", which should be achieved by the means of State support and consolidation: "[w]*e will work to see that state assets maintain and increase their value; we will support state capital in becoming stronger, doing better, and growing bigger* [...]"[23]. The role of the plans was also confirmed: "[w]*e will develop new methods to improve macro-regulation, give full play to the strategic guidance of national development plans*"[24].

Furthermore, the CCP Constitution was amended to include President Xi's Thought on Socialism with Chinese Characteristics for a New Era, further reaffirming the role of the CCP: "*Leadership of the Communist Party of China is the most essential attribute of socialism with Chinese characteristics, and the greatest strength of this system*"[25]. President Xi's work report statement that "[t]*he Party exercises overall leadership over all areas of endeavour in every part of the country*"[26] was also introduced into the General Program of the CCP Constitution.

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21 See President Xi's speech *Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era,* delivered at the 19th National Congress of the CCP on 18 October 2017, p. 17.

22 Ibid, p. 18.

23 Ibid, p. 29.

24 Ibid.

25 The General Program of the CCP Constitution.

26 See President Xi's speech *Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era,* p. 17.

The Thought on Socialism with Chinese Characteristics for a New Era eventually found its way also into the Constitution, the preamble of which was amended accordingly in 2018 (see Section 2.2.2 above).

The 20th Party Congress in October 2022 was marked by consolidation of President Xi's power, entering his third term as Chinese president and emphasizing in his review to the Congress that "*over the past five years, we have continued to strengthen the overall leadership of the Party and the centralized, unified leadership of the Central Committee*"[27], thereby strengthening the overall CCP dominance over the state and the economy further. The appointment of key positions in the Politburo Standing Committee with allies of President Xi further strengthened his position[28].

During the Congress, President Xi emphasized that China will be transformed "*into a modern socialist country in all respects and advance toward the Second Centenary Goal*"[29], coining the term of '*socialist modernization*' as the main goal for the upcoming five years. The broader economic policy of the previous years was not fundamentally put in question, with – on the one hand - selected parts of the economy subject to an opening up and liberalization, and – on the other hand - with clear prioritisation of strong SOEs (see Chapter 5) and the pursuit of economic and technological self-reliance[30].

In any event, signs of further entrenchment of CCP ideology-driven politics into economic policy have become more apparent. Indeed, President Xi added a section on science-technology-innovation in his report to the Congress, pointing towards an intensification of technological self-reliance in order to counter "*foreign efforts*" to contain China and making the Chinese economy more secure in the face of foreign and domestic risks[31]. Moreover, he mentioned that China has been "*confronted with drastic changes in the international landscape, especially external attempts to blackmail, contain, blockade, and exert maximum pressure on China, we have put our national interests first, focused on internal political concerns, and maintained firm strategic resolve*"[32]. This national security and technological self-sufficiency focus, in combination with the social stability accents (see also Section 2.3.1) not only shows a growing concern in China about its external relations, it also indicates that the CCP is likely to prioritize these issues in situations of possible conflict with the objective of economic efficiency or growth[33].

In sum, the 19th and the 20th Party Congress consolidated and formalized developments towards an ever stronger role played by the Party in all areas of the State. The continued focus of China's leadership on strengthening the role of the Party has since become the defining feature of

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27 De Wei, L. (2022). *Full Text of Xi Jinping's Speech at China's Party Congress.* Bloomberg.com; available at: https://www.bloomberg.com/news/articles/2022-10-18/full-text-of-xi-jinping-s-speech-at-china-20th-party-congress-2022?leadSource=uverify%20wall (accessed on 7 March 2023).

28 Wessling, C., Thalman, E., Wiesmann, G., Seidl, H., Hinrichs, A. (22 October 2022). *MERICS China Essentials.*

29 *De Wei, L. (2022). Full Text of Xi Jinping's Speech at China's Party Congress.*

30 Wessling, C., Thalman, E., Wiesmann, G., Seidl, H., & Hinrichs, A.

31 *Ibid.*

32 *De Wei, L. (2022). Full Text of Xi Jinping's Speech at China's Party Congress.*

33 *Ibid.*

China's recent development. The Party's role has been promoted in all sectors of the economy – whether state-owned or private. Moreover, the Chinese economic model characterised by the undisputed dominance of the Party over the State structures has been systematically projected as the fundamental element of the alleged superiority of the Chinese governance model compared to the western-style political and economic setup[34].

2.2.5. 14TH FYP

The 13th Five Year Plan ('*13th FYP*')[35], in declaring that "[w]*e will follow the principles of socialist political economy with Chinese characteristics, release and develop productive forces, continue in the direction of reform to develop the socialist market economy* […]"[36] professed the country's allegiance to the concept of socialist market economy.

The 14th FYP further confirms the continued adherence to this basic socio-economic axiom. After concluding that "[t]*he objectives and tasks of the 13th Five Years Plan have successfully been completed*' and that '*socialist China stands in the East with a more majestic posture*"[37], the 14th FYP lists the "*guiding ideologies, principles and strategic orientations*", with the guiding ideology being described as follows[38]:

> *We will hold aloft the great banner of socialism with Chinese characteristics, and deeply implement the spirit of the 19th Party Congress and the Second, Third, Fourth, and Fifth Plenums of the 19th CCP Central Committee; persist in taking Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory, the important thinking of the "Three Represents," the Scientific Development Concept, and Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era as the guide; fully implement the Party's basic theory, basic line, and basic strategy; use comprehensive planning to advance the overall layout of economic construction* […].

The section on "*main objectives for economic and social development*" contains the goal to "*further refine the socialist market economy and basically complete construction of a high-standard market system*"[39].

This type of statement can also be found in other legislative and policy documents: the State keeps invoking the role of markets in resource allocation and is committing to improving the legal framework in which private enterprises operate. At the same time, the wording is unequivocal with respect to the active role of the Government, the leadership of the CCP and the power of state authorities to decisively shape the development of the private sector[40].

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34 See for example Grünberg, N. - *Party-state capitalism under Xi: integrating political control and economic efficiency* (2021), available at: https://merics.org/en/party-state-capitalism-under-xi-integrating-political-control-and-economic-efficiency (accessed on 14 March 2023).

35 For more details concerning the planning system see Chapter 4.

36 Part I, Chapter 1 of the 13th FYP.

37 Part One, Article I, Section 1 of the 14th FYP.

38 Part One, Article II, Section 1 of the 14th FYP.

39 Part One, Article III, Section 2 of the 14th FYP.

40 Examples of this type of legal provisions can be found in various Guiding Opinions on reforms of the state-owned sector (see Section 5.3) but also for example in the Guidelines on stepping up the United Front work

The 14th FYP therefore once again confirms that the supremacy of the public sector under the CCP leadership over the private sector is there to stay. Moreover, the development of the private sector should continue to be guided by the authorities. In other words, the socialist market economy concept remains at the core of China's economic setup, with the role of the CCP growing in importance.

2.3. Basic Features of the Socialist Market Economy

2.3.1. General Features of Economic Policy under the Socialist Market Economy Doctrine

Prior to the launching of the '*Open-door*' policy in China in 1978, which opened China up for market-oriented economic reforms, the Chinese economy was essentially a closed, state-planned economy, mainly consisting of state-owned and collectively owned enterprises. The move to a socialist market economy meant a shift from a pure planned economy to a hybrid system.

It is fair to say that while the Chinese economy has developed remarkably in the last forty-five years and is much more deeply integrated in the global economy, it has also developed into a unique economic system unlike any other in the world.

The system has been described in the following way[41]:

> *Compared with the Japanese developmental pattern, in which central government agencies simply planned the development process and calibrated industrial policies, China's state capitalism encourages both central and local governments to play a straightforward role in supporting local industries with various forms of financial aid and services. China's developmental miracle owes much to the socialist heritage of the Maoist era, which instituted a strong Leninist party-state and a concentration of power in the Communist Party of China. This model tends to promote* [SOEs] *at the expense of private actors in pillar industries (zhizhu chanye), but for emerging industries (xinxing chanye) where no national champions can be identified, the local authorities are often ready to offer generous help for these indigenous firms, regardless of their ownership structures.*

China has consistently perceived industrial policies as a tool to achieve economic goals defined by the Government. Those goals have been subject to ongoing adjustments and redefining according to China's immediate priorities against the backdrop of global economic and political developments. For example, from the early-2000s onwards, the Government began to focus its

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in the private sector for the new era, issued by the General Office of the CCP's Central Committee in September 2020 (see Section 3.3.2). According to these guidelines: *Strengthening the United Front work in the private sector is an important element of the development and improvement of the socialist system with Chinese characteristics. In order to uphold and improve the socialist system with Chinese characteristics and to foster the modernisation of the country's governance system and capabilities, it is imperative to always adhere to and improve our fundamental economic system, unswervingly consolidate and develop our public-sector economy, and unswervingly encourage, support and guide the development of our non-public-sector economy.* See Article I(2) of the Guidelines, available at: http://www.gov.cn/zhengce/2020-09/15/content_5543685.htm (accessed on 14 March 2023).

41 Chen, G., (2015). *China's Solar PV Manufacturing and Subsidies from the Perspective of State Capitalism*, The Copenhagen Journal of Asian Studies 33(1), p. 92.

efforts on upgrading the economy away from traditional industries reliant on low-skilled labour, setting the targets of science and technology to contribute 60% to the economy in 2020, and the degree of reliance on foreign technology to drop to 30%.[42] By 2015, acquiring key technological competences in strategic sectors defined in the Made in China 2025 initiative (see Section 4.2.3) became the Government's central priority, shaping the industrial policies accordingly (see Chapter 5 for details).

More recently, in view of the growing political and trade tensions between China and the US, as well as the economic and social impacts of the COVID-19 pandemic, the concept of '*dual circulation*' (see also Section 8.2) and its central idea of technological self-reliance (see Section 2.3.2 below) has been ranking high on the Government's industrial policy agenda[43]. Following its introduction by President Xi in the first half of 2020, the dual circulation concept was quickly followed up by lower ranking politicians[44] as well as by government authorities[45] and it also features in the 14th FYP. According to the plan[46]:

> *We will accelerate the construction of the new development pattern in which domestic great circulation is the mainstay and domestic and international circulation are mutually reinforcing.*

This succinct statement characterizes the dual circulation concept very well. The domestic circulation as the mainstay refers to the emphasis on the domestic economic cycle (production, distribution, consumption) which will result in a lower degree of reliance on imports, in particular technological ones[47]. The mutual reinforcement of the domestic and international circulation, on the other hand, signals the continued intention of ever increasing penetration of global markets by Chinese industrial operators. This is also reflected in the following statement in the 14th FYP concerning the domestic circulation: "*We will optimize and improve the supply structure and promote the coordinated development of agriculture, manufacturing, the service industry, energy resources, and other industries. We will improve industrial support systems, accelerate the marketization of competitive links in natural monopoly industries, and realize the effective linkage of upstream and downstream, production, supply, and marketing*". And for the international circulation, the plan envisages China to: "[…] *optimize the layout of the*

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42 See The National Medium- and Long-Term Program for Science and Technology Development (2006-2020), Section II.2.; available at: www.itu.int/en/ITU-D/Cybersecurity/Documents/National_Strategies_Repository/China_2006.pdf (accessed on 14 March 2023). See further President Xi's speech at the Central Financial and Economic Affairs Commission, available at: http://www.qstheory.cn/dukan/qs/2020-10/31/c_1126680390.htm (accessed on 14 March 2023).

43 See Herrera, A.G. - *What is Behind China's Dual Circulation Strategy*, 2021; available at: https://www.bruegel.org/2021/09/what-is-behind-chinas-dual-circulation-strategy/ (accessed on 14 March 2023).

44 See Grieger, G. – *China's economic recovery and dual circulation model*, European Parliamentary Research Service, December 2020, p. 6; available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659407/EPRS_BRI(2020)659407_EN.pdf (accessed on 14 March 2023).

45 Ibid, p. 2.

46 See Part IV of the 14th FYP.

47 Blanchette, J.; Polk, A. – *Dual Circulation and China's New Hedged Integration Strategy*, 2020; available at: https://www.csis.org/analysis/dual-circulation-and-chinas-new-hedged-integration-strategy (accessed on 14 March 2023).

international market, guide enterprises to cultivate traditional export markets and expand emerging markets, expand the scale of trade with neighbouring countries, and stabilize our share of the international market".

The domestic and the international economic cycle are therefore meant to boost each other in the dual circulation strategy. Thus, the concept represents a continuity with previous economic policy objectives[48] and industrial strategies – such as the Made in China 2025's drive for indigenous innovation in high end technologies or the Belt and Road Initiative (see Section 4.2.4) and the related overseas investments – to which the dual circulation strategy sets new accents rather than departing from them[49]. This is also apparent from additional implementing legislation related to the dual circulation concept, such as the State Council's Opinions on Promoting the Integrated Development of Domestic and Foreign Trade[50] which define the guiding ideology and basic principles as follows:

> *Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirit of the 19th National Congress of the Communist Party of China and the 19th Plenary Session, based on the new development stage, completely, accurately and comprehensively implement the new development concept,* [...] *promote the high-level convergence of domestic and foreign trade laws and regulations, regulatory systems* [...].
>
> *Give full play to the decisive role of the market in the allocation of resources, better play the role of government policy guidance and public services, fully mobilize the enthusiasm of enterprises, enhance the ability of market entities to integrate domestic and foreign trade operations, and stimulate endogenous development momentum* [...].
>
> *Strengthen the top-level design and overall planning for the integrated development of domestic and foreign trade,* [...] *improve the institutional system, work system and evaluation system for the integrated development of domestic and foreign trade, and comprehensively coordinate and continue to promote the integrated development of domestic and foreign trade.*

The dual circulation concept is complemented by a further policy related to the socialist market economy doctrine, such as, for example, the '*common prosperity*' policy which has been characterized by President Xi as follows:

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48 For a wider context of the dual circulation strategy, including China's quest for self-reliance in food production, see Che, C. – *Can China secure its food and own the future of farming?*, 18 March 2022; available at: https://supchina.com/2022/03/18/can-china-secure-its-food-and-own-the-future-of-farming/ (accessed on 14 March 2023).

49 Concerning the extent of possible "decoupling" of China from Western markets, standards etc., see e.g. *Decoupling - Severed Ties and Patchwork Globalisation*; European Chamber of Commerce in China (EUCCC) in partnership with MERICS, January 2021, p. 10-13; available at: https://merics.org/en/report/decoupling-severed-ties-and-patchwork-globalisation (accessed on 14 March 2023).

50 Opinions of the General Office of the State Council on Promoting the Integrated Development of Domestic and Foreign Trade, available at: http://www.gov.cn/zhengce/content/2022-01/19/content_5669289.htm?mc_cid=1a4df450e3&mc_eid=523ec61747 (accessed on 14 March 2023).

We are now marching toward the Second Centenary Goal of building China into a great modern socialist country. In response to the evolution of the principal challenge facing Chinese society and people's growing needs for a better life, we must make achieving common prosperity the focus of the Party's efforts to seek happiness for all Chinese people, which will in turn solidify the foundations of the Party's long-term governance. [...]

We should undertake thorough research on targets in different stages, and advance common prosperity in phases. By the end of the 14th Five Years Plan period (2021-2025), we will have made solid progress toward bringing prosperity to all, while gaps between individual incomes and actual consumption levels will gradually narrow. By 2035, we will have made more notable and substantive progress toward common prosperity, and equitable access to basic public services will be ensured. By the middle of this century, common prosperity will be basically achieved [...].

We must base our work on the reality that China remains in the primary stage of socialism, and reaffirm our commitment to the development of both the public and non-public sectors of the economy. We must uphold the predominance of public ownership while also allowing various forms of ownership to develop side by side, so as to leverage the important role of the public sector in advancing common prosperity. Meanwhile, we should also promote healthy growth of the non-public sector of the economy and of people working in this sector. [...]

Bringing prosperity to all is highly integrated with our efforts to promote well-rounded human development. We must reinforce the guiding role of core socialist values, and strengthen education on patriotism, collectivism, and socialism.[51]

In practice, the timing in which the '*common prosperity*' concept started gaining prominence, as well as the substance of the related measures taken by the Government, confirms that China's economic development remains strongly politically led, firmly guided by the socialist market economy doctrine. On the one hand, the common prosperity concept – by arguably also trying to address some of the most pressing issues of the country's economy - may feed into the wider framework of policies aimed at further increasing the purchasing power of the Chinese population in order to be able to divert China's growth model away from investment towards domestic consumption, thereby decreasing any potential for political instability. On the other hand, analysts have suggested that some of the measures adopted by the Government in the name of common prosperity, such as the crackdown on technology platforms or the private tutoring sector, are mere populist moves aimed only at trimming the wealth and economic power of selected individuals at the top end of the income spectrum. Instead, the declared goal of reducing inequality and closing the income gap in the Chinese society could be achieved by

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51 *Speech at the 10th meeting of the Central Financial and Economic Commission on 17 August 2021, available at:* http://en.qstheory.cn/2022-01/18/c_699025.htm *(accessed on 14 March 2023).*

other, more sustainable and productive measures, in particular taxation reforms and strengthening of the social security system[52].

In sum, the general features of the socialist market economy doctrine, as well as the recent policies described above, demonstrate that the State/Party continues to shape the overall economy of the country. The doctrine provides an ideological anchoring which justifies the State's top-down interventionist industrial policy to achieve industrial modernisation and the use of the versatile toolbox developed for that purpose. The elaborate system of plans covering practically all aspects of the economy and levels of government will be discussed in detail in Chapter 4, the significant state ownership stakes in important enterprises in strategic sectors and related instruments, such as the Government Guidance Funds, in Chapter 5. Resource allocation is further controlled through the Government intervention with respect to specific factors of production, such as land (see Chapter 9), labour (see Chapter 13) or energy (see Chapter 10). Further typical instruments used are price setting[53], various forms of financial support including funding and subsidisation, market access controls including restrictive practices, loan approvals, project examination and approvals, as well as licensing and government procurement (see Chapter 7). Regulatory policy interventions defining which industrial sectors should be the focus of attention for support by authorities also represent a typical instrument (see Section 2.3.2). Another tool used by the Chinese authorities to steer the economy in the direction of the Government's objectives, in particular when it comes to promoting certain sectors or increasing the regulatory pressure on others, are industry associations (see Section 2.3.3 below). Last but not least, various information technology ('*IT*') control mechanisms, such as the corporate social credit system (see Section 2.3.4 below), are being deployed by the Chinese authorities to ensure a smooth transmission of the Government's policy agenda into actual conduct of business operators.

However, going well beyond a set of mechanisms through which the State intervenes into markets to pursue industrial policy goals, the socialist market economy doctrine allows the State to instrumentalize the economy for political purposes. As shown in the remainder of this section, the State authorities have been doing so frequently and in various contexts.

2.3.2. INDUSTRIAL POLICY INTERVENTIONS AFFECTING RESOURCE ALLOCATION

Chinese industrial policies are demonstrably interventionist and there is no sign that this should change in the foreseeable future[54]. While the industrial policies related specifically to SOEs are described in Chapter 5, the 14th FYP also specifies a number of policy objectives concerning

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52 See, for example, Roberts, D.T. – *What is „Common Prosperity" and how will it change China and its relation with the world?* 2021, Atlantic Council.

53 See Report to Congress on China's WTO compliance, US Trade Representative ('USTR'), 2021, p. 56; available at: https://ustr.gov/sites/default/files/enforcement/WTO/2021%20USTR%20Report%20to%20Congress%20on%20China's%20WTO%20Compliance.pdf (accessed on 14 March 2023).

54 For a wider evaluation of industrial policies and recommendations with respect to China's situation, see also: Innovative China – New Drivers of Growth; *World Bank* Group, *Development Research Center of the State Council,* p. 30-36; available at: https://openknowledge.worldbank.org/bitstream/handle/10986/32351/9781464813351.pdf?sequence=7&isAllowed=y (accessed on 14 March 2023).

the private sector. Under the heading "*We will promote the high-quality development of private enterprises*", the plan contains the following passage[55]:

> *We will improve the mechanisms by which private enterprises can participate in the implementation of major national strategies. We will push private enterprises to operate in compliance with laws and regulations and encourage private enterprises to actively fulfil their social responsibilities and participate in social welfare and charitable activities.*

Such language could be read as being linked to the idea of '*common prosperity*' described in the previous Section. However, and more importantly, it also remains a testimony to the ongoing practice of strong governmental interventions into the private economy, a system in which private companies are expected to complement the state-owned sector in pursuing the Government's industrial policies and, when necessary, to accept the State's interference in their business conduct.

For policy reasons, e.g. to achieve technological advancements and other '*major national strategies*', such as those mentioned in the previous Section, Chinese authorities often select specific industry sectors as a priority. Those industries are then to be promoted through regulatory and/or financial incentives. Innovation is frequently emphasised as a key driver of growth in this context and the Government seeks to accelerate Chinese manufacturing moving up the value chain, as well as to establish China as a global centre of innovation and technology. Major examples of industrial policies promoting selected sectors include the 2010 State Council Decision on Accelerating the Development of Strategic Emerging Industries ('*SEI Decision*'), in which the Government identified seven strategic emerging industries ('*SEIs*')[56] to be the priority of industrial upgrading.

Currently, the wide range of industrial sectors which the Government considers a technological priority encompasses, among others, new generation information technology, biotechnology, new energy, new materials, high-end equipment, new energy vehicles, green and environmentally friendly products, and aerospace and marine equipment[57]. The National Development and Reform Commission's ('*NDRC*') 2020 Guiding Opinions on Expanding Investment in Strategic Emerging Industries and Cultivating Strengthened New Growth Points and Growth Poles[58] provide more details on China's approach to SEIs. In particular, they subdivide wider sectors into more specific industrial areas, thereby providing an extremely detailed list of the Government's industrial priorities. For example, in the sector of new materials, the authorities are required to focus on breakthroughs in photoresist, high-purity target materials, high-temperature alloys, high-performance fibre materials, high-strength and high-conductivity heat-resistant materials, corrosion-resistant materials, large-size silicon wafers, electronics packaging materials, on improving the technical levels of rare earth,

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55 See Article XIX, Section 5 of the 14th FYP.

56 Industries included: (i) energy efficient and environmental technologies, (ii) new generation information technology, (iii) biotechnology, (iv) high-end equipment manufacturing, (v) new energy, (vi) new materials, and (vii) new-energy vehicles.

57 See Article IX, Section 1 of the 14th FYP.

58 Available at: https://cset.georgetown.edu/publication/new-chinese-ambitions-for-strategic-emerging-industries-translated/ (accessed on 14 March 2023).

vanadium-titanium, tungsten-molybdenum, lithium, rubidium-caesium, graphite, and other special resources in the areas of mining, smelting, and deep processing, as well as on accelerating the expansion of graphene, nanomaterials, etc. in optoelectronics, aviation equipment, new energy, biomedicine, and other domains[59].

In the sector of new energy, the priorities are core technology components such as main bearings, insulated-gate bipolar transistors, control systems, and high-voltage direct current submarine cables, wind, solar, and water storage, advanced fuel cells, efficient energy storage, marine energy generation, construction of infrastructure networks such as smart power grids, microgrids, distributed energy resources, new types of energy storage, hydrogen production and hydrogenation facilities and fuel cell systems, raising the level of digitization and intelligentization of infrastructure networks such as for advanced coal-fired power plants, nuclear power plants, and unconventional oil and gas exploration and development[60].

The guiding opinions further indicate which authority assumes responsibility for a given industrial sector.

Third, they specify how the selected sectors should be supported. The overall requirement is defined as "*guide the rational allocation and effective concentration of key factors of production such as talent, land use, and energy use*' and '*funds follow the project, key factors of production follow the project*"[61], whereas the modalities of how support shall be provided are specified as follows[62]:

> *Make good use of all levels and types of government funds, venture capital, and government-funded industry investment funds. Innovate modes of government funding support, and strengthen the role of investment in attracting* [attention to] *major projects in strategic emerging industries. Encourage local governments to set up special funding plans for strategic emerging industries, and guide social capital to set up industry investment funds in a market-oriented way.* [...]
>
> *Encourage financial institutions to innovate and develop financial products and services adapted to the characteristics of strategic emerging industries, increase support for core enterprises in the production chain, optimize financial services for upstream and downstream enterprises in the production chain, and improve internal assessment and risk control mechanisms. Encourage banks to explore the establishment of financial service centers or business units for emerging industries. Promote cooperation between governments, banks, and enterprises.*[63]

In terms of funding, China created in January 2013 in this respect a central government-level support fund for SEI development while encouraging local governments to establish their own local SEI support funds. Similarly, Made in China 2025, which stresses concepts such as

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59 Ibid, Section II (4).
60 Ibid, Section II (5).
61 Ibid, Section I.
62 Ibid, Section IV (14).
63 Ibid, Section IV (15).

indigenous innovation and self-sufficiency, is centred around significant government support through funding[64] of as many as ten strategic technological sectors.

In addition to the direct designation of certain industries as priority in order to spur the sectors' development, the State also shapes the industrial landscape by controlling sectoral investment. China maintains three distinctive negative lists for investment (see Chapter 8 for more details[65]), among which the Market Access Negative List ('*MA Negative List*') [66], applicable to both domestic and foreign investors, restricts investment and requires administrative approval with respect to 117 sectors, while the Special Administrative Measures for Foreign Investment Access ('*FI Negative List*')[67], applicable only to foreign investors, prohibits or restricts investment in an additional 31 sectors. Similar lists and approval mechanisms are also commonly used in government procurement (see Chapter 7).

Moreover, complementing the sectoral approach, Chinese authorities also channel support to enterprises based on their size and their contribution to the long-term policy goals of indigenous innovation and decreasing dependence on foreign technologies. A good example for this complementarity of industrial policies and the range of methods by which the policies are pursued provides the '*little giants*' initiative[68], mentioned also in the 14th FYP[69] and the 14th FYP to Promote the Development of SMEs[70]. Little giants are mainly small and medium-sized companies selected on the basis of a three-tier assessment system for government support. These SMEs typically manufacture products or possess know-how in niche areas, mainly where the Chinese authorities have identified technological bottlenecks or a need for upgrade and modernisation.

Given that the criteria to be selected entail also financial performance, intellectual property and strategic relevance rather than just size, some companies selected by the Chinese authorities are publicly listed with significant market capitalizations or companies belonging to larger SOE groups.[71] By mid-2021, almost five thousand enterprises were designated as little giants[72], with

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64 See Report to Congress on China's WTO compliance, USTR, 2021, p. 18.

65 See further Report to Congress on China's WTO compliance, USTR, 2021, which also emphasizes that the 2020 Foreign Investment Law puts foreign investors at a disadvantage in various respects compared to domestic investors (p. 32).

66 Available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202203/P020220325357066649367.pdf (accessed on 14 March 2023).

67 Available at: http://www.gov.cn/zhengce/zhengceku/2021-12/28/content_5664886.htm (accessed on 14 March 2023).

68 See the 2018 MIIT Notice on the cultivation of specialized and special new "little giant" enterprises , available at: https://zjtx.miit.gov.cn/zxqySy/tzggView?id=4582181d4e22415b89dd731bd714408f (accessed on 14 March 2023). For a comprehensive analysis of the initiative, see Brown, A., Chimits, F., Gregor, S. –*Accelerator state: How China fosters "Little Giant" companies*, (2023) MERICS; available at: https://merics.org/en/report/accelerator-state-how-china-fosters-little-giant-companies (accessed on 6 October 2023).

69 See Article VIII, Section 2 of the 14th FYP.

70 Available at: https://www.gov.cn/zhengce/zhengceku/2021-12/17/5661655/files/b3a2c31e3ed44c7f8a120d1e9a8d4d53.pdf (accessed on 14 March 2023).

71 See Chen, E. - *Little Giants, Big Expectations*, 2022; available at: www.thewirechina.com/2022/05/01/little-giants-big-expectations/ (accessed on 14 March 2023).

72 Yangcheng Evening News, *433 Enterprises in Guangdong Recognized as National Little Giants* (May 25, 2022), available at: https://new.qq.com/omn/20220525/20220525A02GWH00.html (accessed on 14 March 2023).

the Government target to cultivate 10 000 little giants by 2025 achieved ahead of time already in 2023[73] with some 12 000 little giants established[74].

The following excerpt of the relevant guiding opinions[75] describes in some detail various components of support mechanism that the Government has in mind[76]:

> *Speeding up the fostering and development of high-quality manufacturing enterprises is an imperative requirement in order to stimulate market players and promote the high-quality development of the manufacturing industry; it is also an urgent necessity in order to prevent and resolve underlying risks as well as to enhance the indigenous control capacity over industrial supply chains.* [...]
>
> *Focus on key industries and sectors to guide all types of enterprises such as "little giants" to grow into leading champion enterprises on international markets, and guide large enterprise groups to develop into leading enterprises with ecological leadership and international competitiveness.* [...]
>
> *Raise the level of modernization of the industry supply chain.* [...] *Support the participation in the building of national supply chain innovation and application demonstration projects and foster a number of modern manufacturing supply chain demonstration enterprises. Promote the concentration of state-owned capital of high-quality enterprises in important industries and fields related to national security and to the national economy's lifeline and accelerate the layout rearrangement in key segments and high-end sectors of industry chains* [...] *Guide willing champion enterprises and pilot enterprises to ensure the orderly transfer of related industries to the central and western regions and northeast China.* [...]
>
> *Involve various types of government guidance funds and encourage social capital to contribute to the establishment of high-quality enterprise incubator funds. Duly use existing funding channels to support the high-quality development of "specialized and specific" small and medium-sized enterprises.*

The above excerpt also illustrates how the little giants initiative is embedded into the wider government industrial upgrading policies, in particular the goal to upgrade China's manufacturing capabilities, in the context of which cultivating high-tech SMEs is but one the methods how to achieve such goals. The little giants initiative also exemplifies the gradual

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73 See Brown, A. - *China relies on "little giants" and foreign partners to plug stubborn technology gaps*; available at: https://merics.org/en/short-analysis/china-relies-little-giants-and-foreign-partners-plug-stubborn-technology-gaps (accessed on 14 March 2023); see also the MIIT notice concerning the fourth batch of specialized and special new "little giant" enterprise, available at: https://zjtx.miit.gov.cn/zxqySy/tzggView?id=31038fbce79145a28ba694df8e3f011f (accessed on 14 March 2023); see also People's Daily, *China to Develop Ten Thousand Little Giant Companies During the 14th Five-year Period* (Aug. 3, 2021), available at: www.gov.cn/xinwen/2021-08/03/content_5629102.htm (accessed on 14 March 2023); see also Brown, A., Chimits, F., Gregor, S., p. 11.

74 See Brown, A., Chimits, F., Gregor, S. –*Accelerator state: How China fosters "Little Giant" companies*.

75 Guiding Opinions on Accelerating the Cultivation and Development of High-quality Manufacturing Enterprises, issued by MOF, MoC, CSRC, Ministry of Science and Technology, MIIT, SASAC in 2021; available at: http://www.gov.cn/zhengce/zhengceku/2021-07/03/content_5622135.htm (accessed on 14 March 2023).

76 *Ibid.*, Introduction and points 2, 4 and 9.

evolution of such methods, where accents of the government support may shift over time[77] - across sectors, across type of recipients primarily benefitting (e.g. large SOEs and/or private SMEs), across type of support (e.g. regulatory and/or financial support) etc. – without, however, changing the overall pattern of government interventions shaping the countries economy in line with political priorities adhering to the socialist market economy doctrine.

It is further worthwhile mentioning in the context of industrial policy interventions that the more high-level and systematic industrial policies of the Chinese authorities can be in some instances also complemented by regulatory measures which do not qualify as industrial policies in the narrow sense and do not directly emanate from the socialist market economy doctrine. They nevertheless result in affecting markets and upsetting trade flows, and they demonstrate that the Chinese authorities may subordinate economic rationality to political priorities in certain situations. The 2021 events related to China's spat with Lithuania[78] over the status of Taiwan's representative office in Vilnius provide a good example[79].

2.3.3. INDUSTRY ASSOCIATIONS

Many Chinese industry associations are remnants of abolished ministries[80], and their role within China's overall economic setup deserves special consideration, as industry associations have traditionally served as a bridge between government and enterprises. However, as shown below, the trajectory on which industry associations find themselves in China does not point towards becoming entities merely attempting to influence policymaking in favour of their respective industries, as is common in western countries.

Certain regulatory developments in the past suggested a possible decoupling of industry associations from the influence of the State authorities. In particular, in July 2015, the Central Committee of the CCP and the General Office of the State Council issued the Overall Proposal for the Separation of Industry Associations and Chambers of Commerce from Administrative Organs with the stated purpose of making industry associations more independent from the

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77 See Brown, A., Chimits, F., Gregor, S., p. 13-14.

78 For a related issue concerning Slovenia, see for example here: https://www.gov.si/en/news/2022-01-17-interview-of-prime-minister-janez-jansa-for-the-indian-national-television-doordarshan/ (accessed on 14 March 2023), as well as here: https://www.total-slovenia-news.com/politics/9521-slovenia-taipei-to-open-economic-cultural-representative-offices (accessed on 14 March 2023).

79 The economic pressure on Lithuania exercised by Chinese authorities eventually triggered the EU's reaction at the WTO level (see DS610 - China - Measures Concerning Trade in Goods and Services, Request for consultations by the European Union, available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=(%20@Symbol=%20(wt/ds610/1%20))&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChanged=true# (accessed on 14 March 2023). As of writing of this Report, the work of the Panel has been suspended, following the European Union's request of 25 January 2024. In the past, China has used tactics of similar nature against Norway or Australia. Another recent example is Slovenia, see for example: Lau, S. - Slovenia to bolster trade ties with Taiwan, wading into row with China, 2022, available at: https://www.politico.eu/article/jansa-slovenia-to-follow-lithuania-for-new-office-in-taiwan/ (accessed on 14 March 2023). For wider context, see also: Ghiretti, F.; Stec, G., des Garets Geddes, T. - An expert look at EU-China 2022 + China-Lithuania + EU-China WTO dispute (2022); MERICS, available at: https://merics.org/en/merics-briefs/expert-look-eu-china-2022-china-lithuania-eu-china-wto-dispute (accessed on 14 March 2023).

80 Such as the Ministry of Light Industry, Ministry of Textile Industry, etc.

government[81]. However, in December 2016, the NDRC, the Ministry of Civil Affairs ('*MCA*'), and other eight central departments issued the Measures for Comprehensive Supervision on Industry Associations and Chambers of Commerce[82], which called for "*strengthening the Party's leadership, establishing and improving the party organisations in industry associations and chambers of commerce, and giving full play to the political core role of such Party organisations*"[83]. The measures also required that "*Party building requirements shall be written in the articles of association*"[84].

Similarly, in 2019, the NDRC launched an exercise with the declared task of institutional separation of industry associations and chambers of commerce from government. Even though the opinions[85] issued in this connection formally foresaw a separation of institutions, functions, financial assets etc.[86], they ensured not only a continued financial dependency of industrial associations on the government authorities[87] but also the continued full CCP control over them:

> *Party building work bodies of social organizations at all levels shall* [...] *strengthen concrete guidance, deeply promote Party building in decoupled industry associations and chambers of commerce,* [...] *comprehensively strengthen the Party's leadership over industry associations and chambers of commerce, and ensure that the Party's work is uninterrupted and the role of Party organizations is not weakened in the decoupling process.* [...] *Party building work bodies of social organizations at all levels shall urge industry associations and chambers of commerce to introduce the requirement of Party building work into their articles of association, so as to complete the working mechanisms ensuring the Party organizations' participation in decision-making on major issues and to standardize management.*[88]

Indeed, in 2021, the MCA issued model text of statutes for industry associations and chambers of commerce[89] according to which any such organisation "*abides by the constitution, laws, regulations and national policies, practices the core socialist values, carries forward the spirit of patriotism, abides by social ethics, and consciously strengthens the construction of integrity and self-discipline*' and '*adheres to the overall leadership of the Communist Party of China*

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81 Overall Proposal for the Separation of Industry Associations and Chambers of Commerce from Administrative Organs, Central Committee of CCP, General Office of the State Council, 8 July 2015 (original text in Chinese), available at: http://www.gov.cn/gongbao/content/2015/content_2901370.htm (accessed on 14 March 2023).

82 Measures for Comprehensive Supervision on Industry Associations and Chambers of Commerce, NDRC, Ministry of Civil Affairs et. al., 19 December 2016 (original text in Chinese), available at: http://www.gov.cn/xinwen/2016-12/29/content_5154008.htm (accessed on 14 March 2023).

83 *Ibid.*, Part 1.

84 *Ibid.*, Article 29.

85 Opinions on the Implementation of the Reform of Comprehensively Decoupling Industry Associations and Chambers of Commerce from Administrative Organs, NDRC, Ministry of Civil Affairs et. al., 14 June 2019 (original text in Chinese); available at: http://www.gov.cn/xinwen/2019-06/17/content_5400947.htm (accessed on 14 March 2023).

86 Point 3 of the Opinions.

87 Point 3(2) of the Opinions, according to which administrative organs are encouraged to purchase services from qualified industry associations.

88 Section 4 of the Opinions.

89 Available at: http://hn.flgw.com.cn/art/list2.asp?id=3449 (accessed on 14 March 2023).

and, in accordance with the provisions of the Constitution of the Communist Party of China, establishes the organization of the Communist Party of China, develops the activities of the Party, and provides the necessary conditions for the activities of the Party organization"[90]. The model text further consolidates the Party influence over the statutory bodies of industrial associations, insofar as the functions of both the General Assembly and the Council of an association entail reporting back to and seeking approval by the Party on managerial, as well as procedural matters[91].

To provide an example, the Articles of Association (*'AoA'*) of the China National Light Industry Council, adopted in July 2021, reproduce the above model text word by word[92]. They also – strictly speaking beyond the template of the model text – require the directors of the association to "*support the Party's line, principle and policies*"[93]. The president, as well as the vice-presidents and the secretary general of the association, are further required to "*adhere to the leadership of the communist party of China, support socialism with Chinese characteristics, resolutely implement the party's line, principles and policies, and have good political qualities"*[94]. The latest version of the AoA of the China Iron and Steel Association[95] dates back to 2020, yet it features virtually identical wording to the model text with respect to the purpose of the association[96], the adherence by the association to the overall leadership by the Party[97] and the necessary requirements for the president, vice-presidents and secretary general[98].

It should be further noted that the model text did not really change the situation on the ground. The AoA of a number of major industry associations which were in place before the release of the model text already fully reflected the requirement for the formalized leading role of the Party. The model text therefore mainly consolidated existing practice.

The growing emphasis on Party leadership within industry associations is also apparent from recent regulatory developments, such as from the State Administration's for Market Regulation (*'SAMR'*) Opinion on Involving Private Workers and Private Enterprise Associations to

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90 See Articles 2 and 3 of the model text.

91 See Articles 17(3) and 18 of the model text.

92 See Articles 2 and 3 of the AoA, available at: http://www.cnlic.org.cn/footers/footer-zc.html (accessed on 14 March 2023). Other examples of a very similar structure and wording are the AoA of the China Bicycle Association, available at: http://www.china-bicycle.com/information/?cid=33 (accessed on 14 March 2023), as well as the AoA of the China Association of Automobile Manufacturers, available at: http://www.caam.org.cn/bmsite_v3/chn/2/cate_8/con_5223238.html (accessed on 14 March 2023).

93 See Article 21(1) of the AoA.

94 See Article 36(1) of the AoA.

95 Available at: http://www.chinaisa.org.cn/gxportal/xfgl/portal/content.html?articleId=cf5ea600ab07fee32430a4b1bab6209fc835c0f83fea5e09d33a2b1edfa356ab&columnId=0227750914a0f2a722c5b71b220e0aa19ceb0ee2cd7a7e325a35f6591cdbf66a (accessed on 14 March 2023).

96 According to Article 2, the Association "*abides by the constitution, laws, regulations and national policies, practices the core socialist values, abides by social ethics, and consciously strengthens the construction of creditworthiness and self-discipline*".

97 According to Article 3, "*the Association establishes the organization of the Communist Party of China, carries out party activities, and provides necessary conditions for the activities of the party organization*".

98 According to Article 36(1), such persons shall „*adhere to the leadership of the communist party of China, support socialism with Chinese characteristics, resolutely implement the party's line, principles and policies, and have good political qualities*".

Promote the High Quality of the Private Economy under a New Situation[99]. This opinion, issued in March 2022, provides that it is necessary to strengthen political guidance, promote the building of the Party, give full play to the advantages of keeping all private associations in close contact with all private enterprises, and to continuously strengthen political guidance and ideological education towards all private economic stakeholders. It also requires market supervision departments at all levels to intensify their efforts to guide private associations to foster Party building work in small enterprises, individually owned businesses, and the professional market.

The recent regulatory developments therefore confirm the formal role of the CCP within industry associations. Consequently, as of the writing of this report, industry associations, far from being in the process of effectively decoupling from the State authorities, continue to constitute another vehicle of Party control over the Chinese industry.

2.3.4. Control and Use of Information and Communication Technology

The Corporate Social Credit System ('*CSCS*'), a unique way by China to achieve some of the proclaimed goals of the socialist market economy doctrine, such as strengthening economic control or preventing individuals and organizations from disturbing the socio-economic order, which was officially launched in 2014,[100] represents probably the most visible project of leveraging the potential of modern information and communication technologies ('*ICT*') to collect and process digital data for the purpose of monitoring and guiding companies' behaviour. The system is designed to monitor virtually all aspects of a company's business in China.

Central government authorities define the areas where the CSCS monitors compliance by companies, for example, tax, customs, product quality, environmental protection, with local authorities having a considerable leeway for putting in place regulations supplementing or expanding the national-level legislation. In 2019, for example, the CSCS measured around 30 different ratings that in turn were established on the basis of circa 300 requirements. Compliance is monitored against relevant information that is collected for this purpose in meta-databases (such as the National Enterprise Credit Information Publicity System); however, collection and sharing of information between various components of the CSCS remains a major issue as of the writing of this Report.

In case of non-compliance, various sanctions will be imposed. These range from sanctions directly linked to the area where non-compliance happened, e.g. a penalty in case of a late tax filing but can also consist of consequences in areas that have no link with the company's non-compliance (joint sanctions).[101] Serious offenders can be blacklisted. In case of blacklisting, a

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99 Available at: https://www.samr.gov.cn/xw/zj/202204/t20220402_341067.html (accessed on 14 March 2023). See also: https://amr.wuhu.gov.cn/openness/public/6596721/34251341.html (accessed on 14 March 2023).

100 But had been considered by Chinese authorities since the 1990s, see Drinhausen, K. and Brussee, V. - China's Social Credit System in 2021 – From Fragmentation towards Integration (MERICS, 2022), available at: https://merics.org/sites/default/files/2022-05/MERICS-China-Monitor67-Social-Credit-System-final-4.pdf (accessed on 14 March 2023).

101 *Ibid.*, p. 10.

comprehensive set of sanctions applies. These sanctions are set out in memoranda of understanding between different government authorities (in 2019, some 50 such memoranda had been concluded). For instance, non-compliance can result in blacklisting such as the refusal to deliver government approvals (investment permits, granting of LUR etc.), to provide access to preferential policies (e.g. subsidies and tax rebates) or limiting access to public procurement markets, although the company's failure to comply has nothing to do with the area to which the sanction pertains.

Moreover, compliance is no longer a binary question ('Has the tax return been filed in time? – yes or no' etc.) that is linked to a targeted sanction (e.g. administrative penalty in case of late or incomplete filing). Rather, the CSCS establishes individual scores in the various areas and on top an overall score that combines the ranking in tax matters, environmental matters, social security etc.

The legal provisions that define how the CSCS shall operate are dispersed across a wide range of regulatory documents, both on the national and subnational levels. Moreover, essential concepts – such as definitions of various types of social credit itself – remain unclear or absent. This may complicate the business conduct of economic operators, in particular in combination with the fragmented implementation of the system by competent authorities[102].

Some analysts consider the CSCS a manifestation of "*the long-term and fundamental objectives of the CCP to detach the organization and operation of politics, economics, and society from their roots in the ideologies and practices of liberal democracy and its economic expression through markets-based regulation underpinned by rule-of-law* [...]"[103].

Others take a more cautious view and distinguish between perceptions of the CSCS within China and outside of China[104]:

> *International commentators tend to focus on the long-term potential of the system to be used as a weapon of trade war against foreign companies and to strengthen the socioeconomic control of the state. It has been pointed out that, while the CSCS was ostensibly created to enforce adherence to laws and regulations, those laws and regulations exist at the sole discretion of the Party. By contrast, domestic reception is largely positive. By and large, observers tend to view the CSCS in light*

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102 See Drinhausen, K. and Brussee, V., p. 6-7, 12-13. See further The Digital Hand, How China's Corporate Social Credit System Conditions Market Actors (EUCCC, 2019); available at: www.europeanchamber.com.cn/en/publications-corporate-social-credit-system (accessed on 21 March 2023).

103 Catá Backer, L. – China's Social Credit System: Data-Driven Governance for a "New Era"; *Current History* (2019) 118 (809): 209–214; available at: https://online.ucpress.edu/currenthistory/article/118/809/209/107508/China-s-Social-Credit-System-Data-Driven (accessed on 21 March 2023).

104 Schaefer, K. (lead author) – China's Corporate Social Credit System – Context, Competitionn, Technology and Geopolitics; Trivium China, November 2020; available at: https://www.uscc.gov/sites/default/files/2020-12/Chinas_Corporate_Social_Credit_System.pdf (accessed on 21 March 2023). See also Chipman Koty, A. - China's Corporate Social Credit System: What Businesses Need to Know (China Briefing, 2019), available at: www.china-briefing.com/news/chinas-corporate-social-credit-system-how-it-works/ (accessed on 21 March 2023).

of its immediate potential to clean up a business environment perennially dogged by malfeasance and fraud.

In any event, while it might be too early to draw definitive conclusions about the CSCS, a 2021 the US – China Economic and Security Review Commission's ('*USCC*') report[105] encapsulates the nature of the CSCS. According to this report, the CSCS "*aims to provide China's government a nationwide system to monitor all aspects of corporate behavior and administer automated regulatory responses to keep companies in line with the CCP's governance objectives*", and it makes it possible for "*the CCP to compel compliance with Chinese law and alignment with CCP policy priorities, including among foreign firms. In place of hard controls currently governing market access, such as investment restrictions, the CSCS provides a framework of incentives to manipulate domestic and foreign firms' behavior within and beyond China's borders*". Similarly, a 2022 MERICS analysis considers the CSCS a tool within the wider ambition to "*expand, integrate and analyse existing data sources to improve and consolidate CCP rule*", even if the social credit system as such „*is not tasked with conducting political surveillance of individual behaviour*" and „*the central authorities recognise the dangers of automation for legal and administrative processes*"[106].

Beside the CSCS, western stakeholders have expressed their concerns with respect to numerous other aspects of Chinese ICT-related policies[107], typically highlighting the discriminatory nature of those policies vis-à-vis foreign operators[108]. While such ICT policies go beyond the scope of this Report, a direct relevance in the area of trade defence exists at least with respect to the Chinese authorities' control and censorship of online content. In particular, the Government's objective to build '*civilised*' internet which should primarily serve the purpose to promote education about the CCP and its achievements[109] makes access to certain online information – ranging from policy documents to academic research to financial information on individual market operators and industry sector – an increasingly difficult task.

2.4. CHAPTER SUMMARY

The preamble of the Constitution, further provisions in the Constitution, the CCP Constitution, as well as various other legal acts and documents refer to the term 'socialist market economy', invoking it as the basic framework of China's socio-economic set-up. As apparent from the relevant legislative and policy documents, this unique economic system grants the State, as well as the CCP, a decisive role in the economy. While the Constitution recognises that diverse forms of ownership develop side by side, and while the Chinese economy consists to a large extent of

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105 2021 Report to Congress of the US-China Economic and Security Review Commission, p. 227-8; available at: https://www.uscc.gov/annual-report/2021-annual-report-congress (accessed on 21 March 2023).

106 See Drinhausen, K. and Brussee, V., p. 4, 13.

107 In particular in areas such as cybersecurity, data localisation requirements or protection of intellectual property rights.

108 See for example European Business in China Position Paper 2021/2022 – European Chamber of Commerce in China, p. 327ff; available at: https://www.europeanchamber.com.cn/en/publications-archive/964/European_Business_in_China_Position_Paper_2021_2022 (accessed on 4 April 2022) or See Report to Congress on China's WTO compliance, USTR, 2021, p. 7.

109 See for example Reuters - China targets online platforms in quest to 'clean up' internet, 23 December 2021; available at: https://www.reuters.com/world/china/china-targets-online-platforms-quest-clean-up-internet-2021-12-23/ (accessed on 21March 2023).

non-state actors, the Party and the State retain a leading role in the economy of the country, going well beyond macroeconomic control. The leadership role of the CCP and its all-encompassing controls are in fact inherent in China's official designation as a socialist market economy[110].

In practice, the socialist market economy system has meant that while market forces have been mobilised to some degree, the decisive role of the State remains intact, with tight interconnections between government and enterprises. The basic features of the socialist market economy are dominant state-ownership, an extensive and sophisticated economic planning system, as well as interventionist industrial policies and a broad array of other tools to pursue political and economic objectives set by the Party and/or the Government. This system does not prioritise and often does not result in market-based resource allocations. Indeed, the concept of socialist market economy prioritises other objectives - such as '*socialist modernization*'. "*Giving play to decisive role of market forces*", a phrase often found in Chinese policy documents, remains only an incidental means for achieving those objectives, with the market forces tolerated where suitable rather than being considered the main organising principle of the national economy.

110 Houtari, M., Heep, S., Heilmann, S. (2017). *The dynamics of a developmental state,* in Heilmann, S. (Ed.) (2017), *China's Political System.* Lanham, Maryland: Rowman & Littlefield, p. 239.

3. CHINESE COMMUNIST PARTY

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3.1. INTRODUCTION

Among all the distinctive features of China today, the undisputed dominant position of the CCP is arguably the most significant one. The Party rules over all essential aspects of the country's life, whether those directly relevant for this Report – such as economy or China's institutional set-up – or those outside the scope of the present analysis even if nevertheless crucial for CCP's grip on China – such as military affairs or education.

As of the writing of this Report, the Party and the State have effectively grown together and form an amalgam in which differences between structures of the Party and those of the State has become blurred and largely indistinguishable. The fundamental principle of separation of powers to which most western countries adhere does not play a role in China and is even explicitly rejected[111]. According to the CCP Constitution[112]:

> *Leadership of the Communist Party of China is the most essential attribute of socialism with Chinese characteristics, and the greatest strength of this system. The*

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111 See Gao, Ch. - Xi: China Must Never Adopt Constitutionalism, Separation of Powers, or Judicial independence (see Chapter 2), available at: https://thediplomat.com/2019/02/xi-china-must-never-adopt-constitutionalism-separation-of-powers-or-judicial-independence/ (accessed on 13 February 2023).

112 See the General Program of the CCP Constitution, available at: https://english.news.cn/20221026/d7fff914d44f4100b6e586372d4060a4/c.html (accessed on 15 February 2023).

Party is the highest force for political leadership. The Party exercises overall leadership over all areas of endeavour in every part of the country.

The CCP exercises its control over the country and its economy through a number of channels, among which the following are typically considered the core ones as far as the economy is concerned:

- full control over strategic sectors of the economy including control of the financial system and capital resources,
- control of personnel issues including all essential appointments,
- policy coordination through a formal network of Party entities/committees across State authorities and the economy, as well as informal networks among industrial entities and links between the Party and private enterprises[113].

All this allows the CCP to also bring the private sector into line with the CCP agenda. Accordingly, this chapter will analyse the most salient aspects of the CCP's control over China's state apparatus (see Section 2.2) and its economy (see Section 2.3). In doing so, attention will be paid not only to the formal and institutional framework on which the CCP rule is based, but also to the more informal tools used by the Party. The latter aspect is all the more important given that the degree and magnitude of CCP's interventions has been changing over time and has been increasing since the rise to power of President Xi[114].

3.2. Relationship Between State and Party

3.2.1. Legal Framework

The CCP is the sole governing party of China. Its leadership is affirmed in the preamble of the Constitution:

Under the leadership of the Communist Party of China and the guidance of Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory and the important thought of Three Represents, the Scientific Outlook on Development and Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Chinese people of all nationalities will continue to adhere to the people's democratic dictatorship and the socialist road [...].

Article 1 of the Constitution elaborates on the concept:

The People's Republic of China is a socialist state governed by a people's democratic dictatorship that is led by the working class and based on an alliance of workers and peasants.

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113 See Wu, M. (2019), *China's rise and the growing doubts over trade multilateralism*; Trade War - The Clash of Economic Systems Endangering Global Prosperity, available at: digamoo.free.fr/tradewarcepr19.pdf (accessed on 15 February 2023). See further for example Ma, J., *Party-State relations under China's Communist Party: Separation of powers, control over government and reforms*, available at: www.scmp.com/news/china/politics/article/3133672/why-chinas-communist-party-inseparable-state (accessed on 15 February 2023).

114 See for example Blanchette, J. - Xi's Gamble: *The Race to Consolidate Power and Stave off Disaster*; Foreign Affairs, vol. 100, no. 4, July/August 2021, pp. 10-19.

The socialist system is the fundamental system of the People's Republic of China. Leadership by the Communist Party of China is the defining feature of socialism with Chinese characteristics. It is prohibited for any organization or individual to damage the socialist system.

The references to the leadership of the CCP, Marxism-Leninism, Mao Zedong Thought, Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the pledge to adhere to the socialist road and the people's democratic dictatorship are mirrored in various provisions of the CCP Constitution, in particular in its chapter titled 'the General Program' which states:

The Communist Party of China is the vanguard of the Chinese working class, the Chinese people, and the Chinese nation. It is the leadership core for the cause of socialism with Chinese characteristics and represents the developmental demands of China's advanced productive forces, the orientation for China's advanced culture, and the fundamental interests of the greatest possible majority of the Chinese people.

The Four Cardinal Principles - to keep to the socialist road and to uphold the people's democratic dictatorship, leadership by the Communist Party of China, and Marxism-Leninism and Mao Zedong Thought - are the foundation on which to build the country. Throughout the course of socialist modernization the Party must adhere to the Four Cardinal Principles and combat bourgeois liberalization. [...]

The Communist Party of China shall lead the people in developing socialist democracy. It shall preserve the organic unity of Party leadership, the running of the country by the people, and law-based governance, follow the Chinese socialist path of political development and the path of socialist rule of law with Chinese characteristics, expand socialist democracy, develop a socialist rule of law system with Chinese characteristics, and build a socialist rule of law country, thereby consolidating the people's democratic dictatorship and developing a socialist political civilization.

Both constitutions thus confirm the primordial role of the CCP in leading China and "*the cause of socialism with Chinese characteristics*". The commitment to developing the socialist economy with Chinese characteristics is then routinely repeated in general provisions of various individual pieces of secondary legislation[115].

The General Program of the CCP Constitution also makes clear that economic development is the central task of the Party:

In leading the cause of socialism, the Communist Party of China must persist in taking economic development as the central task, making all other work subordinate to and serve this central task.

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115 See for example Article 1 of the Civil Code or Article 1 of the Law on State-Owned Assets in Enterprises (see Chapter 5 for more details).

Furthermore, the General Program of the CCP Constitution clearly states that it is for the CCP to develop the socialist market economy (See Chapter 2) as well as to guide the public and private sectors in the economy:

> *The Party must fundamentally reform the economic structure that constrains the development of the productive forces and uphold and improve the socialist market economy; and in congruence with this it must undertake political structural reform and reform in other fields.*
>
> *The Communist Party of China shall lead the people in developing the socialist market economy. It shall be firm in consolidating and developing the public sector of the economy and shall remain steadfast in encouraging, supporting, and guiding the development of the non-public sector*[116].

The Party's claim to leading the country's development is complemented by the corresponding provisions[117]:

> *The entire Party must improve the capacity for political judgment, thinking, and implementation and become more self-motivated and resolute in implementing the Party's theories, lines, principles, and policies* [...]*; focus on improving the organizational system to train high-caliber officials who are loyal to the Party, clean, and responsible and to bring together talented people from all fields who are patriotic and dedicated; and select officials on the basis of both moral integrity and ability, with greater weight given to integrity, and on the basis of merit, so as to provide a strong organizational guarantee for upholding and strengthening overall leadership of the Party and upholding and developing socialism with Chinese characteristics. The whole Party must work to improve the political and organizational functions of Party organizations, train and select the good officials that our Party and people need, cultivate a large team of personnel who are capable of shouldering the mission of the times and well prepared to carry on the socialist cause, and bring together the brightest minds from all over, thus ensuring organizationally that the Party's basic theory, basic line, and basic policy are fully implemented and applied.*

Those provisions in turn translate into obligations of individual CCP members to advance the Party's objectives and to respect the principle of so-called democratic centralism[118]:

> *All Party members must hold high the great banner of socialism with Chinese characteristics, have firm confidence in its path, theory, system, and culture, carry forward the fighting spirit and build up our fighting ability, implement the Party's basic theory, basic line, and basic policy, and strive to fulfil the three historic tasks of advancing modernization, achieving China's reunification, and safeguarding world peace and promoting common development, and realize the Second Centenary Goal and the Chinese Dream of national rejuvenation.* [...]

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116 See the Constitution of the Communist Party of China, General Program.

117 *Ibid.*

118 See General Program and Article 10 of the Constitution of the Communist Party of China for details.

> [A]*ll Party members must keep firmly in mind the need to maintain political integrity, think in big-picture terms, uphold the leadership core, and keep in alignment, and firmly uphold the authority and centralized, unified leadership of the Central Committee with Comrade Xi Jinping at the core.*

The demand for comprehensive loyalty of individual members to the Party's leadership and to the supreme leader personally may have been considered a formality in the past. However, recent developments of the Xi era mark a shift towards full adherence to the directions given by the Party's central authorities is expected and enforced[119], even if at times labelled as pursuing - or coinciding with - other objectives, such as the long-term anti-corruption campaign[120].

In sum, the Constitution, as the centrepiece of Chinese legislation, defines China's socio-economic setup as '*socialist system*', in which the leadership is not only conferred upon the CCP but for which the Party leadership actually represents a constitutive element. The central document of the CCP's internal organisation – the CCP Constitution – mirrors the Constitution by:

- repeating that leadership role,
- by declaring the economic development to be the Party's central mission and
- by providing rules of conduct - both for the Party as a whole as well as for individual members – on how to achieve the objectives.

These objectives include China's economic development, as part of the long-term goal of the "*great rejuvenation of the Chinese nation*" (see Section 3.3.4).

3.2.2. CCP CONTROL OVER THE STATE INSTITUTIONS

The Constitution defines the role of various bodies of the State, including those which nominally represent the legislative, the executive and the judiciary branch of the government. However, since the principle of separation of powers is not accepted/adopted in China's political doctrine, the individual branches of government represent a functional division of tasks rather than ensuring balance of powers and, in any event, they remain subordinate to the CCP leadership (see Sections 3.1 and 3.2.1). All this was aptly summarized by a then member of the Standing Committee of the Central Political Bureau of the CCP and then Secretary of the Central Commission for Discipline Inspection[121]:

> *In China's history and tradition, 'government' is always understood as a broad concept, undertaking unlimited responsibility. The Party's organs, the NPC's organs, the administrative organs, the CPPCC's*[122] *organs as well as the courts and prosecutors' offices are seen by the general public as all being the government.*

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119 See for example Hollingworth, J. and Gan, N. - *Xi Jinping only wants the most devoted Chinese Communist Party members. His tough membership rules could backfire* (2021), available at: https://edition.cnn.com/2021/07/30/china/ccp-100-membership-xi-jinping-intl-hnk-dst/index.html (accessed on 15 February 2023).

120 See for example White, E. and Mallet, V., How Xi Jinping's anticorruption crusade went global, available at: www.ft.com/content/ae4d37bd-0440-491b-a4b7-25ab6158e6ad (accessed on 29 July 2022).

121 See at http://news.xinhuanet.com/politics/2017lh/2017-03/05/c_1120572195.htm (accessed on 15 February 2023).

122 Chinese People's Political Consultative Conference (reference added for information).

Under the leadership of the Party, there is no separation between the Party and the Government, there is only a division of work between the Party and the Government: on this matter, we must have a clear stand, be straightforward and be resolutely confident in the way, the theory, the system and the culture of Socialism with Chinese characteristics.

Even if the merits of a greater degree of separation between the State and the Party may have been under consideration by the CCP leadership at times[123], the recent developments show a clear trajectory towards an ever-closer integration of the State and Party structures. The most explicit manifestation of this trajectory may be the 2018 government reform which was carried out in line with the Plan for Deepening the Reform of Party and State Agencies issued by the Central Committee of the CCP ('*2018 Government Reform Plan*')[124]. The introductory part of the plan is very explicit in this respect:

We must resolutely maintain the authority and centralized unified leadership of the Party Central Committee with Comrade Xi Jinping as the core. We must adapt to the development requirements of socialism with Chinese characteristics for a new era, persist in the general principle of seeking progress while maintaining stability, and adhere to the proper direction of reform. [...] *We must take strengthening the Party's total leadership as our command and take modernizing our national governance structure and governance capacity as our orientation, with a focus on promoting the optimization, coordination, and efficient utilization of the functions of Party and state agencies.* [...] *We must improve our efficiency and effectiveness, and actively construct a functional system of Party and state agencies* [...], *setting out on our new journey of building a modernized socialist country, and realizing the Chinese dream of the great rejuvenation of the Chinese nation.*

Similarly, Section 1 of the plan, titled "*Plan for Deepening the Reform of Party Central Committee Agencies*", requires a stronger Party leadership over State authorities, even by mergers between State and Party offices where appropriate:

The Party's organizational structure must be optimized, and the Party's leadership system for major tasks must be established and improved. Better play must be given to the role of functional departments, and the merger or establishment of joint Party-government offices must be promoted where duties are similar. Ministerial duties must be optimized, and the Party's ability and resolve to chart our course, craft overall plans, design policy, and promote reform must be improved. Pervasive Party leadership and firmer and more forceful Party leadership must be ensured.

This framework of the CCP's dominance over the State's apparatus must always be borne in mind when analysing the provisions of the Constitution. The highest organ of State power is the National People's Congress ('*NPC*'). Its role is defined in Article 57 of the Constitution:

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123 See for example Li, L., *"Rule of law" in a Party-state – A conceptual interpretive framework of the constitutional reality of China*, Asian Journal of Law and Society, Vol. 2(1), pp. 93-113, 2015.

124 For the full text of the 2018 Government Reform Plan, see: https://cset.georgetown.edu/publication/ccp-central-committee-publishes-plan-for-deepening-the-reform-of-party-and-state-agencies/ (accessed on 15 February 2023).

The National People's Congress of the People's Republic of China is the highest organ of state power. Its permanent body is the Standing Committee of the National People's Congress.

Article 62 formally grants the NPC extensive powers, such as amending the Constitution; supervising its enforcement; enacting and amending laws; electing top officials including the President and Vice-President; deciding questions of war and peace; approving five-year plans '*FYPs*'; and many other functions pertaining to the most important State decisions. In reality, however, the NPC exercises many of those powers in name only and essentially *'ratifies'* Party decisions[125]. Section 2 of the 2018 Government Reform Plan leaves no scope for doubts in this regard:

The people's congress system is a fundamental political institutional arrangement that adheres to the Party's leadership [...].

In addition, some 70% of NPC delegates were CCP members as of 2021, with another 13% being members of the political parties existing under the umbrella of the CCP-controlled United Front[126].

The executive branch of the State administration shows a similar picture of the Party's dominance. As of the writing of this Report, all ten members of the State Council's executive committee hold high-ranking positions within the CCP, with the Premier and Vice-Premiers being members of the Politburo or the Politburo Standing Committee[127]. Among the 26 Ministers, 24 were CCP members, with the remaining two belonging to one of the United Front parties. Given the broad array of the State Council's competences listed in Article 89 of the Constitution[128], including those in the economic area, the State Council is one of the central institutions for implementing the State's economic agenda. At the same time, in view of the personal and organisational overlap with the Party, the State Council effectively forms an administrative platform for implementing the political decisions of the CCP. The CCP's understanding of the overall relation between the Party and the Government, as well as the 2018 Government Reform Plan described in Section 3.2.2, are in that respect a manifestation of the ever more direct role in policy formulation and implementation that the CCP has been taking[129].

As for the judiciary branch of the State, there are some provisions that point at first sight to a certain independence of the judiciary. Article 131 of the Constitution provides that

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125 Lawrence, S.V., and Martin, M.F. (2013). *Understanding China's Political System*, Congressional Research Service, p. 7.

126 See for example: https://npcobserver.com/about-npc/ (accessed on 15 February 2023).

127 See at: english.www.gov.cn/statecouncil/ (accessed on 27 July 2022).

128 See Article 89 (4) of the Constitution: *"[...] to exercise unified leadership over the work of local state administrative organs at all levels nationwide and to stipulate the detailed division of functions and powers between the Central Government and state administrative organs in provinces, autonomous regions and cities directly under central government jurisdiction* [...]" or Article 89 (5) of the Constitution: "[...] *to draw up and to implement plans for national economic and social development and state budgets* [...]".

129 See also Johnson, C.K. and Kennedy, S. (2015). China's Un-Separation of Powers - The Blurred Lines of Party and Government, in *Foreign Affairs*, available at: https://www.foreignaffairs.com/articles/china/2015-07-24/chinas-un-separation-powers (accessed 15 February 2023).

> [t]*he people's courts shall, in accordance with the provisions of law, independently exercise adjudicatory power, and shall not be subject to interference from any administrative organ, social organization or individual.*

This is echoed by Article 7 of the PRC Judges Law '*Judges Law*'[130], which imposes *"no interference from administrative organs, public organisations or individuals*".

However, there is a provision which explicitly codifies the CCP's control over the judiciary, namely Article 12 of the Judges Law. It stipulates the requirements for being eligible as judge. Among other requirements listed in Article 12, such as Chinese nationality or appropriate legal qualification, paragraph 2 of Article 12 provides that judges must "[u]*phold* [...] *the Constitution of the People's Republic of China, the leadership of the Communist Party of China, and the socialist system".*

According to Article 18 of the Judges Law, presidents of courts are appointed by the NPC or the local People's Congress at various levels, and other judicial appointments are approved by the standing committees of the People's Congresses at the corresponding levels. However, in practice the leadership of courts must at all levels be nominated by the respective CCP committees. When it comes to litigation, politically or economically sensitive cases may also be decided behind the scenes by a judicial committee, in consultation with the Party and administrative offices[131].

Furthermore, the CCP controls the judiciary through Commissions of political and legal affairs at all levels of the CCP hierarchy[132]. These Commissions play a key role in the Chinese system of justice since they exercise political oversight over the police, the courts, and the offices of the public prosecutors; they instruct courts on certain judicial policies; and they may also issue instructions on the judicial outcomes of specific cases[133]. They are regarded as staff organs of the Party committees[134].

Moreover, in the Chinese legal tradition, the concept of rule of law differs from that of Western legal systems in that law has been regarded as an instrument to guide and control.[135] The Chinese characters for '*rule of law*' are often translated as '*rule by law*'[136], and the CCP has

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130 See Judges Law of the PRC, available at: www.npc.gov.cn/englishnpc/c23934/202012/9c82d5dbefbc4ffa98f3dd815af62dfb.shtml#:~:text=Article%201%3A%20This%20Law%20is,in%20accordance%20with%20the%20law (accessed on 15 February 2023).

131 Liebman, B.L. (2015). Legal Reform: China's Law-Stability Paradox, *Daedalus* 143, p.104.

132 Heilmann, S. Shih, L., Rudolf, M. (2017), in Heilmann, S. (Ed.) (2017). *China's Political System.* Lanham, Maryland: Rowman & Littlefield, p. 138.

133 Li, L. (2016). *The Chinese Communist Party and People's Courts: Judicial Dependence in China*, American Journal of Comparative Law, p. 59.

134 Heilmann, S., Shih, L., Rudolf, M. (2017). in Heilmann, S. (Ed.) (2017). *China's Political System.* Lanham, Maryland: Rowman & Littlefield, p. 138.

135 Also the latest Implementation Outline on Building a Rule of Law Government from 2021 to 2025 stresses strengthening the Party's leadership for the building of a government based on the rule of law, available at: english.www.gov.cn/policies/latestreleases/202108/12/content_WS611455aac6d0df57f98de545.html (accessed on 15 February 2023).

136 Chen, G. (2017). *Le Droit, C'est Moi: Xi Jinping's New Rule-By-Law Approach*, in Oxford Human Rights Hub, p. 1.

been on the record stating that the leadership of the CCP and the socialist rule of law are consistent[137]:

> *Implementing Party leadership in the entire process and all aspects of ruling the country according to the law is a fundamental experience of our country's Socialist rule of law construction. Our country's Constitution has established the leading position of the Chinese Communist Party. Persisting in the leadership of the party is a fundamental requirement for Socialist rule of law* [...]. *The leadership of the Party and Socialist rule of law are identical, Socialist rule of law must persist in the leadership of the Party, the leadership of the Party must rely on Socialist rule of law.*

In 2017, the President of the Supreme People's Court '*SPC*' stated that "*China's courts must firmly resist erroneous Western notions, including constitutional democracy, separation of powers and judicial independence*" and "*resolutely fight against wrong words and deeds that deny the leadership of the Communist Party of China*". Furthermore: "*Only in this way can we fundamentally avoid falling into the 'trap' of Western erroneous thinking and judicial independence*"[138]. The SPC's official publicity department reaffirmed those views by stating that creating a legal system independent of the Party "*clearly violates the constitution*", which says administrative, trial and prosecution authorities are all subservient to the NPC[139].

A 2021 article by the CCP's newspaper summarizes the concept of rule of law in China in even clearer terms[140]:

> *Different types of political systems determine different forms of the rule of law system. China is a socialist country under the people's democratic dictatorship, and the leadership of the party is the soul of the socialist rule of law with Chinese characteristics. This is the biggest difference between our rule of law and the rule of law in Western capitalist countries. Without the leadership of the Communist Party of China, a socialist legal system with Chinese characteristics and a socialist country under the rule of law cannot be established.*

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137 Communique of the 4th Plenary Session of the 18th Central Committee of CPC, available at: http://www.china.org.cn/china/fourth_plenary_session/2014-12/02/content_34208801.htm (accessed on 15 February 2023).

138 Reuters, (2017). China's top judge warns courts on judicial independence, available at: http://www.reuters.com/article/us-china-policy-law-idUSKBN1500OF (accessed on 15 February 2023). Also see: http://rmfyb.chinacourt.org/paper/html/2017-01/17/content_120935.htm?div=-1 (accessed on 15 February 2023).

139 *Ibid*. The Commission does not have access to the Weibo account referred to in the Reuters article. However, the reference to independent legal system violating the constitution appears in line with additional statement in the article referenced in the previous footnote, such as: "*For the People's court, resolutely implementing* [the] *important thesis and unswervingly following the path of socialist rule of law with Chinese characteristics is adhering to the fundamental strategy of "equal importance" of ruling the country by law and ruling the country by virtue, as well as vigorously promoting the socialist core values*". Furthermore, according to Article 133 of the Constitution: "*The Supreme People's Court is responsible to the National People's Congress and its Standing Committee. Local people's courts at various levels are responsible to the organs of state power which created them*".

140 See Four Comprehensive (Xi Jinping's Study Questions and Answers on Socialism with Chinese Characteristics for a New Era (20)), (original text in Chinese), available at: http://paper.people.com.cn/rmrb/html/2021-08/13/nw.D110000renmrb_20210813_1-05.htm?mc_cid=0bc681106a&mc_eid=523ec61747 (accessed on 15 February 2023).

An additional tool by which the CCP keeps control in virtually all areas of society is through the creation of Party organisations (also referred to as Party cells, or Party committees). The governmental structure at each level is matched by the organisation and structure of the Party, from the central level down to the village level. Decisions by State institutions must follow guidelines by the Party committees or Party groups established within the State institutions. Furthermore, CCP leaders often act through the offices they hold in the State administration rather than as Party cadres[141]. As such, government and CCP personnel remain in many ways fused, and the practical distinction between the two roles can be very difficult to discern[142]. As mentioned above with regard to the State Council, with very few exceptions, leading government representatives also tend to be Party members[143], which further contributes to the fusion between the State and the Party.

Articles 30 and 32 of the CCP Constitution state that primary Party organisations are to be formed in units which contain three full Party members[144]:

> *A primary-level Party organisation shall be formed in any enterprise,* [...], *government organ,* [...] *and any other primary-level danwei* [an organisation where people work] *where there are three or more full Party members.*
>
> *Primary-level Party organisations shall, according to the requirements of their work and Party member numbers, and with the approval of higher-level Party organisations, establish primary-level Party committees, general Party branch committees, or Party branch committees.* [...]
>
> *Primary-level Party organisations play a key role for the Party in the basic units of social organisation; they are the foundation for all the Party's work and for its capacity to take on challenges. Their main tasks are:*
>
> *1) to communicate to the public and carry out the Party's lines, principles and policies, the resolutions of the Party Central Committee and other higher-level Party organisations, and their own resolutions; to give full play to the exemplary and vanguard role of Party members, to excel in their work, and to unite and organize Party officials and non-party officials as well as Party members and non-party members to fulfil the tasks of their danwei.* [...]
>
> *7) to ensure that Party officials and all other personnel strictly observe state laws and regulations and the state's financial and economic statutes and regulations on personnel, and that they do not infringe on the interests of the state, collectives, or the people.*

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141 Lawrence, S. (2013). *China's Political Institutions and Leaders in Charts*. Congressional Research Service, p. 4.

142 Ip, E.C. (2011). *The Supreme People's Court and Judicial Empowerment in China*, p. 379, in Columbia Journal of Asian Law.

143 Lawrence, S. and Martin, M. (2013). *Understanding China's Political System.* Congressional Research Service, p. 28.

144 See the CCP Constitution, Article 30 and Article 32

The primary Party organisations, as part of the basic structure of the Party[145], are complemented by leading Party members groups[146], which represent another channel through which the CCP makes incursions into the functioning of governmental institutions as well as non-public organisations. According to Articles 48-50 of the CCP Constitution, wherever formed, these bodies are granted the *de facto* leadership of such organisations[147]:

> *A leading Party members group may be formed in the leading body of central or local state organs, people's organisations, economic or cultural institutions, or other non-Party organisations. Such a group shall play the leading role. Its main tasks are: to ensure that the Party's lines, principles, and policies are implemented; to strengthen leadership over Party building within its danwei and fulfil its responsibility for exercising strict Party self-governance in every respect; to discuss and make decisions on matters of major significance within its danwei; to manage officials to proper effect; to discuss and decide on important issues including adjusting the setup of primary-level Party organisations, admitting new Party members, and disciplining Party members; to encourage non-Party officials and the people in fulfilling the tasks entrusted to them by the Party and the state; and to exercise leadership over the work of the Party organisations of the danwei and those directly under it.*
>
> *The composition of a leading Party members group is decided on by the Party organisation that approves its establishment. A leading Party members group shall appoint a secretary and, when necessary, deputy secretaries. A leading Party members group must accept the leadership of the Party organisation that approves its establishment.*

The leading Party members groups have been becoming increasingly important in the Chinese system. While they have existed since the 1950s, they have been recently taking an unprecedented role in that they help define problems, set priorities, and determine the proper sequencing of policies across a wide range of areas[148].

3.2.3. CCP Control over Cadres and Personnel

A key pillar of the CCP's power is its control of personnel appointments across all political institutions, the military, SOEs, and public institutions. The CCP, counting some 96.7 million members as of the end of 2021[149], essentially appoints all senior personnel in government and administrative bodies and also SOEs, centrally as well as regionally. This is done through the

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145 *Ibid.* Chapter II - The Party's Organizational System

146 *Ibid.* Article 48.

147 *Ibid.* Article 48 and Article 49.

148 For further information on linkages between state and Party leaders, as well as on a further type of State/Party organisational entities, namely Small Leading Groups (effectively as an interagency executive committee, cutting across the government, party, and military systems), see Batke, J. and Stepan, M. (2017). *Party, State and Individual Leaders. The Who's Who of China's Leading Small Groups.* Mercator Institute for China Studies, available at: https://merics.org/en/short-analysis/ccps-nerve-center-0 (accessed on 20 February 2023).

149 Representing about 6.85% of the Chinese population. See for example at: www.statista.com/topics/1247/chinese-communist-party/#topicHeader__wrapper (accessed on 15 February 2023).

so-called cadre system. The CCP Organisation Department is the body in the Party bureaucracy responsible for the recruitment of Party members and their training, as well as assignments and appointments[150], doing so in line with the CCP's internal regulations, such as the 2021 Regulations on the Organizational Work of the Communist Party of China[151]. According to Article 5 of the Regulations "*the Central Organization Department guides the work of organizational departments at all levels, and the higher-level organizational departments guide the work of lower-level organizational departments,*" while Article 6 stipulates that "*the Party Central Committee decides on organizational work lines, principles, and policies,* [...] *comprehensively leads the Party's organizational system construction, cadre work, and talent work, and recommends, nominates, and appoints and dismisses cadres in accordance with relevant provisions*".

The Organisation Department organises cadres according to rank (see in particular Article 8 of the Regulations on the Organization and Work of the CCP[152]). Chinese political culture features carefully observed systems of ranks that identify the relative importance of people, official agencies, public institutions, SOEs, and geographic units. While the Party and bureaucratic ranking are different - formally not comparable – systems, Party ranking can be considered superseding any ranking in the State system due to the Party leadership position. Moreover, SOE leaders sometimes outrank the Party and government leaders in the geographic jurisdictions in which they are based, which can result in a specific dynamic where, for example local government cannot issue binding orders to such SOE leader while, at the same time, the SOE has to follow local government rules and decisions[153]. Moreover, it is not unusual that SOE managers move between enterprises and government functions (see Sections 5.5.1 and 5.5.2). Investigations into the individual backgrounds of the members of the boards of directors and the supervisory councils of major industrial enterprises have revealed that a large majority of them are not only Party members, but also hold senior positions in the government and CCP hierarchy or have done so prior to serving in the corporate sector[154].

Furthermore, civil servants are obliged to adhere and carry out the policy of the Party, according to Article 4 of the Law of the PRC on Public Servants[155], which states:

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150 For an organisational overview of the CCP, see for instance: http://www.chinatoday.com/org/cpc/ (accessed on 15 February 2023).

151 The Central Committee of the Communist Party of China issued the Regulations on the Organization and Work of the Communist Party of China (original text in Chinese), available at: www.gov.cn/zhengce/2021-06/02/content_5615053.htm (accessed on 15 February 2023).

152 According to Article 8, among the main duties of the Central Organization Department and the Organization Department of local Party Committees features also the responsibility for the unified management of cadre work and the cadre contingent, and the responsibility for specific work related to the construction of leading bodies in accordance with the authority and division of labor of cadres.

153 See for example Lawrence, S.V., and Martin, M.F. (2013). *Understanding China's Political System*, Congressional Research Service, p. 15.

154 Taube, M. and Schmidkonz, C. (2015). *Assessment of the normative and policy framework governing the Chinese economy and its impact on international competition*, Report prepared by THINK!DESK China Research& Consulting for AEGIS EUROPE, p. 246. For more detailed examples, please see pp. 247-248.

155 Law of the People's Republic of China on Public Servants (adopted by the NPC on 27 April 2005, last amended on December 29, 2018), http://www.npc.gov.cn/zgrdw/npc/lfzt/rlyw/2018-12/29/content_2071578.htm (accessed 20 February 2023).

In application of the public servant system, Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory, the important thought of 'Three Represents', Scientific Outlook on Development and Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era shall be upheld as the guidance, the basic line for the primary stage of socialism shall be implemented, the organizational routes of the Communist Party of China for a new era shall be carried out, and the principle that cadres are under the administration of the Party shall be adhered to.

3.3. CCP'S DOMINANCE OVER THE ECONOMY

To the extent that any state can exercise control over its economy, the CCP's dominance over the structures of the Chinese state translate directly into its grip over China's economy. The unique grip of the country's economy in view of the importance of the state-owned sector (see Chapter 5), combined with the Party cells and the powers of the Organisation Department to appoint also the cadres of SOEs, means that the CCP controls the economy particularly tightly. The CCP's control mechanisms may take somewhat different formats in the state-owned sector (see Section 3.3.1) and in the private one (see Section 3.3.2). Nevertheless, the resulting control over the economic operators, in combination with the control over the state structures described above in Section 3.2, allows the CCP to formulate and implement its economic policies by using a number of formalized and informal tools and channels (see Section 3.3.3). Those economic policies in turn demonstrate the Party's broader long-term strategic and economic considerations and priorities (see Section 3.3.4). The CCP's determination to control the economy recently has been restated in the book "*Outline for the Study of Xi Jinping's Economic Thought*" published in June 2022, where the first chapter is about strengthening the Party's overall leadership over economic work[156].

3.3.1. CCP CONTROL OF THE STATE-OWNED SECTOR

In view of the significant size of the state-owned sector in China and that it is the leading force of the economy (see Section 5.2) and given that SOEs are expected to pursue a number of goals not based on commercial considerations (see Section 5.3), the CCP has a natural interest to maintain firm control over the sector. In fact, the 3rd Plenum Decision in 2013 stated that "*the basic economic system with public ownership playing a dominant role and different economic sectors developing side by side is an important pillar of the socialist system with Chinese characteristics*" (see Section 2.2.4). Since then, the overall development of the state-owned sector can be described as a steady path towards more Party control. Irrespective of the reasons underlying this direction[157], the 2015 Guiding Opinions on Deepening the Reform of State-

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156 See *General Secretary Xi Jinping creatively put forward a major theoretical point of view about strengthening the party's overall leadership over economic work* (original text in Chinese), available at: http://www.chinadevelopment.com.cn/fgw/2022/09/1798129.shtml (accessed on 15 February 2023).
See also: What does the "Outline for the Study of Xi Jinping's Economic Thought" talk about and how to learn (original text in Chinese), available at: http://www.qstheory.cn/zhuanqu/2022-06/28/c_1128785253.htm (accessed on 15 February 2023).

157 See for example Lin, L.Y.; Milhaupt, C.J. - *Party Building or Noisy Signaling? The Contours of Political Conformity in Chinese Corporate Governance*; Journal of Legal Studies (2020), linking the increasing Party presence in SOE's corporate governance with the need to counterbalance the corporatisation and mixed-ownership reform.

owned Enterprises already mandated unequivocally that Party building within the SOE be included into the respective enterprise's Articles of Association ('*AoA*') and that the SOE's Party organization leadership be included in the board of directors, the board of supervisors or the management (see Section 5.3 for more details).

The Action Plan for Corporate Reform of Central Enterprises[158] issued in 2017 reaffirmed the role of the Party in the restructuring process of SOEs:

> *4. Overall coordination and progress*
>
> *(1) Party leadership shall be strengthened. The Party committee (group) of a central enterprise shall earnestly strengthen the organisation and leadership of the restructuring work,* [...]. *It is imperative to give full play to the core leadership and political role of the Party organisation of a central enterprise to ensure that Party leadership and Party building are fully embodied and effectively strengthened during enterprise restructuring;* [...] *and promptly report the major issues encountered during restructuring to the CPC Central Committee and the State Council.*
>
> *(2)* [...] *A restructured enterprise shall also adhere to two unwavering principles that the Party shall always have leadership over SOEs and that the direction of SOE reforms is to establish the modern enterprise system, unify the efforts to strengthen Party leadership with those to improve corporate governance* [...].

Furthermore, the 2017 amendments of the CCP Constitution[159] conferred on the Party organisation an extensive role in the operations of an SOE, and this provision remains in the 2022 amendments. According to Article 33 of the CCP Constitution, the Party organisation is empowered to participate in decision-making regarding major issues facing an enterprise:

> *The leading Party members groups or Party committees of state-owned enterprises shall play a leadership role, set the right direction, keep in mind the big picture, ensure the implementation of Party policies and principles, and discuss and decide on major issues of their enterprise in accordance with regulations. Primary-level Party organizations in state-owned or collective enterprises should focus their work on the operations of their enterprise. Primary-level Party organizations shall guarantee and oversee the implementation of the principles and policies of the Party and the state within their own enterprise and shall support the board of shareholders, board of directors, board of supervisors, and manager* [...] *in exercising their functions and powers* [...].

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158 State Council General Office's Notice regarding the publication of the Action Plan for a Corporate Reform of Central Enterprises (original text in Chinese), available at: http://www.gov.cn/zhengce/content/2017-07/26/content_5213271.htm (accessed on 15 February 2023). See also: Action plan to reform central SOEs toward corporations, available at: http://english.gov.cn/policies/latest_releases/2017/07/26/content_281475754202054.htm (accessed on 15 February 2023).

159 See at: http://english.www.gov.cn/news/top_news/2017/10/24/content_281475919837140.htm (accessed on 15 February 2023).

The revisions of individual SOEs' AoA prompted by the requirement for more direct CCP involvement in the companies' management[160] resulted in a situation where, by the end of 2018, some 90% of SOEs (central as well as sub-central) amended their statutes to comply with those requirements[161].

China Railway Group is used as an example below. However, the changes in the AoA follow a similar model for most companies[162]. A specific chapter is introduced on the creation of a Party committee, which for China Railway Group contains the following elements[163]:

> *Pursuant to the Constitution of Communist Party of China, the Company shall establish an organisation of the Communist Party of China 'Party', which shall play the role as the core of leadership, and the political nucleus, and take charge of the direction and overall situation and ensure the implementation of policies. The Company shall establish a work institution of the Party with a sufficient number of personnel responsible for the Party affairs and guarantee the working funds of the Party organisation.*

In principle, the chairman of the board and the head of the Party committee is expected to be the same person[164]:

> *The Company shall establish the Party Committee, which shall have one secretary and several members. The chairman of the board of directors shall concurrently serve as the secretary of the Party Committee.*

The AoA then further elaborate on the role of the Party organisation. Its tasks include not only monitoring compliance with CCP and State policies, but also the practical implementation of Party decisions in the company. There is also a direct referral to the role of the SASAC Party committee[165]:

> *To monitor the implementation of the principles and policies of the Party and of the State within the Company, and to implement material strategic decisions made by*

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160 These requirements are elaborated in the 2017 Guiding Opinions of the General Office of the State Council on Further Improving the Corporate Governance Structure of State-owned Enterprises, available at: http://www.gov.cn/zhengce/content/2017-05/03/content_5190599.htm (accessed on 18 April 2023). For example, Article 5(3) requires SOEs and relevant authorities to "[u]*phold and improve the two-way entry and cross appointment leadership system. Eligible members of Party organizations (committees) of state-owned enterprises may enter the board of directors, the board of supervisors and management through legal procedures. Eligible Party members among directors, supervisors and managers may enter Party organizations (committees) according to the relevant provisions and procedures. The Secretary of Party organizations (committees) or chairman is generally served by the same person. Promote the entry of full-time deputy secretaries of Party organizations (committees) of central enterprises into the board of directors. In the selection and appointment of managers by the board of directors, superior Party organizations and their departments and Party committees of state-owned asset supervision and administration institutions shall play the functions of determining standards, standardizing procedures, participating in investigation and recommending candidates.*"

161 Lin, L.Y.; Milhaupt, C.J., p.4, concerning possible explanations why not the totality of SOEs has done so.

162 See Chapters 15 and 6 for further examples.

163 See Chapter 17, Articles 251-253 of the AoA of China Railway Group Limited (amended in June 2017), available at: http://www.hkexnews.hk/listedco/listconews/SEHK/2017/0628/LTN20170628958.pdf (accessed on 15 February 2023).

164 For an additional example, see Article 99 in the revised AoA for China Aluminum International Engineering Corporation Limited (Chalieco) (Chapter 15).

165 Article 253 (1) of the AoA of China Railway Group Limited.

the Central Committee of the Party and the State Council as well as important work deployment assigned by the Party committee of the State-owned Assets Supervision and Administration Commission and Party organisations of higher levels.

The Party committee is furthermore tasked to play a decisive role in the selection and evaluation of officials, together with the board of directors[166]:

To persist in combining the principle of the Party supervising the performance of officials with the legitimate selection by the board of directors of the managers and the legitimate use of human resources by the managers. The Party Committee shall consider and provide opinions on the candidates nominated by the board of directors or the president, or recommend nominees to the board of directors or the president; evaluate the proposed candidates in conjunction with the board of directors, collectively consider and make suggestions.

In addition, the Party committee is to be involved in key management decisions of the company[167]:

To consider and discuss the matters on the reform, development and stability of the Company, major operation and management matters as well as key issues involving the vital interests of employees, and make suggestions.

The changes of the AoA cover also the provisions concerning the board of directors, stating that the Party committee has to be consulted before material issues are decided upon[168]:

When the board of directors decides on material issues, it shall first listen to the opinions of the Party Committee of the Company.

The requirements for introducing Party building activities and the Party role in the decision making were however not limited to AoA of individual SOEs. Statutory documents of industry associations had to be adapted in a similar fashion (see Section 2.3.3, in particular concerning the Measures for Comprehensive Supervision on Industry Associations and Chambers of Commerce, as well as concerning the model text of statutes for industry associations). This established the CCP's formal control over the statutory bodies of the associations.

Furthermore, the CCP's claim to operational control over SOEs has been re-confirmed by a series of regulatory documents such as the 2020 Regulations on the work of CCP Grassroots Organizations in SOEs (according to which Party organisations in SOEs must "*persist in unifying the strengthening of the Party's leadership with the improvement of corporate governance, and integrate the Party's leadership into all aspects of corporate governance*")[169], the Three-year Action Plan on SOE Reforms (2020-2022) (which emphasizes the need to strengthen the leadership of the CCP in SOEs – see Section 5.3) as well as the Opinions on Further Promoting SOEs to Implement the "Three Important and One Large" Decision-making System (which are already in place since 2010 according to which "*the Board of Directors and*

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166 *Ibid.*, Article 253 (2).
167 *Ibid.*, Article 253 (3).
168 *Ibid.*, Article 155.
169 See Article 3(1) of the Regulations; available at: www.gov.cn/zhengce/2020-01/05/content_5466687.htm (accessed on 15 February 2023).

the management team should communicate with the Party committee (group) and listen to their views before discussing 'three important and one large' matters"[170].

In sum, the recent policy and regulatory developments result in a situation in which the SOEs remain the backbone of the Chinese economy and in which the CCP can exercise control over the large state-owned sector. This control is not only exercised by virtue of the State shareholding or the government regulatory power but, crucially, also through direct involvement in the day-to-day management of the CCP's organisation within individual SOEs. The legal framework as described above enables the CCP bodies established inside SOEs to wield significant influence including over business decisions of individual companies. This in turn further increases the importance and usefulness of SOEs as vehicles for the implementation of the Party's economic objectives (see Section 3.3.4)

3.3.2. CCP CONTROL OVER THE PRIVATE SECTOR

Leaders of the private firms are not part of the cadre system. However, this does not mean that private companies would find themselves outside the Party's sphere of influence - or even shielded from their direct interventions. As in the case of the state-owned sector, the recent dynamics of the relations between the Party and the privately owned companies is characterised by a mix of relatively settled principles on the role of the private economy within the Chinese economic system (see Section 2.2.1) and by new policy and regulatory moves towards stronger leverage of the Party over the private sector[171].

On the formal level, the CCP Constitution bestows the Party organisation with considerable influence. In particular, according to Article 33 of the CCP Constitution:

> *Primary-level Party organisations in non-public sector entities shall implement the Party's principles and policies, guide and oversee their enterprises' observance of state laws and regulations, exercise leadership over trade unions, Communist Youth League organisations, and other people's group organisations, promote unity and cohesion among workers and office staff, safeguard the legitimate rights and interests of all parties, and promote the healthy development of their enterprises.*

The creation of party organisations is reconfirmed in relevant legislation such as in Article 19 of the Company Law[172]:

> *In a company, an organisation of the Communist Party of China shall be established to carry out the activities of the party in accordance with the Constitution of the Communist Party of China. The company shall provide the necessary conditions for the activities of the party organisation.*

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170 See Article 3(13) of the Opinions; available at: http://www.gov.cn/jrzg/2010-07/15/content_1655395.htm (accessed on 18 April 2023). Three important and one large" matters mainly refer to major decision-making matters, important appointment and dismissal of personnel, important project arrangement and large amount of capital employment.

171 See Kennedy, S.; Blanchette, J. (ed.), p. 13.

172 The Company Law, available at: http://mg.mofcom.gov.cn/article/policy/201910/20191002905610.shtml (accessed on 15 February 2023).

While the requirement to create Party organisations has been a constant in legislation, it appears to not always have been followed or strictly enforced. However, this has been changing significantly over the past years.

In 2017, the *Opinions of the CCP Central Committee and the State Council on Creating a Healthy Environment for the Development of Entrepreneurs, Promoting Entrepreneurship and Allowing Full Play to the Role Played by Entrepreneurs* were released. Article 28 of the Opinions sets out also the following requirement concerning private enterprises[173]:

> *Educate and guide private entrepreneurs to support the leadership of the party and support the party building work of enterprises. Establish and improve the party building work mechanism of non-public enterprises, actively explore various ways of party building work, and strive to expand the coverage of party organization and work in non-public enterprises. Give full play to the political core role of party organizations in the masses of workers and workers and the political leading role in the development of enterprises.*

Characteristically, this provision is embedded in a section titled "*Strengthen the Party's leadership over the construction of the contingent of entrepreneurs*"[174], which is broader in its scope, containing instructions on the healthy growth of the entrepreneurial environment also to State authorities, municipalities and SOEs.

In 2020, the General Office of the CCP's Central Committee issued the Guidelines on stepping up the United Front work in the private sector for the new era[175]. The introductory remarks to the Guidelines summarize the continuously ambiguous coexistence of the CCP and the private sector:

> [W]*e must* [...] *note that socialism with Chinese characteristics has entered a new era. The private sector continues to expand in scale, bringing markedly more risks and challenges. The values and interests of private-sector professionals have become increasingly diverse.* [...] *In order to fully implement the Party Central Committee's major policy decisions, further strengthen the Party's leadership over the private-sector United Front work, and more effectively pool the wisdom and strength of private-sector professionals towards achieving the goal of the great rejuvenation of the Chinese nation, we put forward the following guidelines.*

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173 Opinions on Creating a Healthy Environment for the Development of Entrepreneurs, Promoting Entrepreneurship and Allowing Full Play to the Role Played by Entrepreneurs (original text in Chinese), available at: http://www.gov.cn/zhengce/2017-09/25/content_5227473.htm (accessed on 15 February 2023).

174 See Section X of the Opinions.

175 Available at: http://www.gov.cn/zhengce/2020-09/15/content_5543685.htm (accessed on 15 February 2023).

However, while these guidelines explicitly acknowledge the importance of the private sector for China's economy[176], their main objective is developing the socialist system with Chinese characteristics of which the leadership of the Party is the most essential attribute[177]:

> [S]*trengthening the United Front work in the private sector is an important element of the development and improvement of the socialist system with Chinese characteristics. In order to uphold and improve the socialist system with Chinese characteristics and to foster the modernisation of the country's governance system and capabilities, it is imperative to always adhere to and improve our fundamental economic system, unswervingly consolidate and develop our public-sector economy, and unswervingly encourage, support and guide the development of our non-public-sector economy.*

Interestingly, the Guidelines not only lay claim to the CCP leadership over the private sector in the standard top-down regulatory approach, but they also seek to increase the Party's presence in private enterprises in a bottom-up manner by means of recruiting or at least training selected individuals from private companies into the CCP:

> *We must* [...] *actively and properly work to recruit Party members from among outstanding private-sector representatives and promptly bring into the Party those with good political qualities and high public approval who meet Party membership criteria. If there is no Party branch in the organisation where they work, the personnel department of the Party committee (leading Party group) above county level can liaise with them and organise their training directly*[178].

The CCP's incursions into the private sector may be subject to adjustments, reflecting the insights of the Chinese leadership that addressing certain structural problems of the country's economy will not be possible without making better use of the private sector's potential. For example, the measures aimed at overcoming the weak economic growth include also nominal support for the development of the private sector, as exemplified by the Opinion of the Central Committee of the Communist Party of China and the State Council on Promoting the Development and Growth of the Private Economy ('Private Economy Opinion')[179], issued in July 2023 with the central goal "*to promote the development and growth of the private economy*".

Indeed, the Private Economy Opinion contains a number of provisions – ranging from competition-related issues, to bankruptcy proceedings, to access to finance, to IP rights[180] - which may have some positive impact on the practical operations of private companies. At the same time, the wording of the Private Economy Opinion confirms unequivocally the Party's

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176 See Article I(1) according to which "*as an intrinsic element of China's economic system, the private-sector economy has always been an important economic foundation for upholding and developing socialism with Chinese characteristics. Private-sector professionals, as 'one of us', have always been an important force that our Party must bring together and rely on for long-term governance*".

177 See Article I(2) of the Guidelines.

178 See Article IV(12) of the Guidelines.

179 See at: https://www.gov.cn/zhengce/202307/content_6893055.htm (accessed on 20 November 2023).

180 See points 2, 4-6, 8, 12 of the Private Economy Opinion.

intent to control the private sector and to steer its development in line with the existing industrial policies, in particular when it comes to technological upgrade in the SEIs[181]:

> *Support the upgrade of scientific and technological innovation capabilities. Encourage private enterprises in accordance with national strategic needs and industry development trends, continue to expand R&D investments, develop key core technology research, and actively undertake major national science and technology projects in accordance with regulations. Cultivate a number of clusters of private science and technology leading enterprises in key industries, of specialized and special new small and medium-sized enterprises, and of small and medium-sized enterprises with strong innovation capabilities.* [...]
>
> *Encourage and raise international competitiveness.* [...] *Encourage private enterprises to expand overseas business, actively participate in the joint construction of the "Belt and Road"* [...].
>
> *Support participation in major national strategies.* [...] *Support private enterprises to invest in the development of labor-intensive manufacturing, equipment manufacturing and ecological industries in the central and western regions and northeast China* [...]. *Support private enterprises to participate in the promotion of carbon peak and carbon neutrality, provide carbon reduction technologies and services, increase investment in renewable energy power generation and energy storage, and participate in the trading of carbon emission rights and energy use rights.* [...]
>
> *Improve the mechanism for the ideological and political construction of people in the private economy. Actively and steadily do a good job in recruiting party members among the representatives of the private economy and advanced elements. Carry out in-depth education on ideals and beliefs and core socialist values. Educate and guide party members in the private economy to strengthen their ideals and beliefs, play a vanguard and exemplary role, and resolutely implement the party's theories, lines, principles and policies. Actively explore and create innovative work methods of party building in the field of private economy.* [...]
>
> *Optimize the structure of the contingent of representatives of the private economy, improve the selection mechanism, taking into account different regions, industries and enterprise sizes, and appropriately give preference to strategic emerging industries, high-tech industries, advanced manufacturing, modern service industries, modern agriculture and other fields.* [...]
>
> *Uphold and strengthen the Party's leadership. Adhere to the centralized and unified leadership of the Party Central Committee over the work of the private economy, and implement the Party's leadership in all aspects of the entire process of work. Adhere to the correct political direction, establish and improve the working mechanism for the development of the private economy and private enterprises, clarify and consolidate the responsibilities of administrative departments,*

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181 *Ibid.*, points 16, 18, 19, 21, 23, 29.

strengthen coordination and cooperation, and strengthen the linkage between the central and local governments. Support the Federation of Industry and Commerce to play a better role in promoting the healthy development of the private economy and the healthy growth of people in the private economy.

In November 2023, the Private Economy Opinion was complemented by the Notice on Strengthening Financial Support Measures to Help the Private Economy Develop and Grow[182], the wording of which suggest the willingness of the Chinese authorities to balance some of the existing biases of the financial system (see Chapter 6) in favour of the state sector by putting an emphasis on the need of access to finance also for private companies, albeit within the limits of the industrial policy priorities set by the Government[183]:

[…] *Banking financial institutions should set annual targets concerning services provided to private enterprises, increase the weight of services provided to private enterprises in performance appraisals, increase financial support to private enterprises, and gradually increase the proportion of loans to private enterprises.* [I]*ncrease support for private enterprises in key areas such as technological innovation projects, "specific and special" projects, green and low carbon projects, and industrial base reengineering projects", and support private enterprises' investment in technological transformation and project construction, actively meet the reasonable financial needs of private small, medium and micro enterprises, and optimize the credit structure. Reasonably increase the tolerance concerning non-performing loans of private enterprises, establish and complete the loan due diligence exemption mechanism for private enterprises, and fully protect the enthusiasm of grassroots enterprises' personnel.* […]

Expand the scale of bond financing of private enterprises. Support private enterprises to register and issue science and technology innovation notes, science and technology innovation bonds, equity-bond products, green bonds, carbon-neutral bonds, transformation bonds, etc., to further meet the funding needs of private enterprises in the fields of technological innovation, green and low carbon etc. […]

3.3.3. SETTING AND IMPLEMENTING ECONOMIC POLICIES

The CCP sets and steers all major economic policies in China, essentially by using the State administration as an instrument to exercise Party power, as well as via the various channels listed above to impose its will on both the public and private sectors. The most formalized channel through which the CCP sets and imposes its economic policies is the country's comprehensive and in-depth economic planning system (see Chapter 4). The CCP plays a

182 Available at: https://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/202311/t20231128_3918521.htm (accessed on 4 December 2023).

183 *Ibid.*, points 1(1) and 1(6).

leading role in the preparation of the FYPs and is empowered to issue the full proposals for the FYPs[184]. even though they are formally approved by the NPC.

In its introductory paragraph, the 14th FYP explicitly refers to recommendations from the CCP as the basis for the plan:

> *The* [...] *14th Five Years Plan* [...] *has been drafted in accordance with the Proposal of the Central Committee of the Chinese Communist Party on Drawing Up the 14th Five Years Plan for National Economic and Social Development and Long-Range Objectives for 2035 to clarify national strategic intentions, make clear the focus of government work, and guide and standardize the behaviour of market entities. It is a grand blueprint for China's embarkation on the new journey of building a modernized socialist country in an all-round way, and a common program of action for all ethnic groups in the country.*

Section 2 of Article II of the 14th FYP expressly reaffirms the leading role of the CCP. The relevant paragraph titled "*Persist in the Party's total leadership*" reads as follows:

> *We will adhere to and refine institutional mechanisms for the Party's leadership of economic and social development, adhere to and refine the system of socialism with Chinese characteristics, continue to raise capabilities and standards for implementing the new development concept and constructing the new development pattern, and provide fundamental assurance for achieving high-quality development.*

According to Article LXIII of the 14th FYP, the CCP is also supposed to take a leading role in the implementation of the plan:

> *We will carry through the Party's requirements for charting our course* [...], *making overall plans, designing policies, and promoting reform, promote the in-depth study and implementation of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era throughout the entire Party,* [...], *bring the Party's leadership into all areas and into the whole process of planning and implementation, and ensure the implementation of the major decisions and arrangements of the CCP Central Committee. We will give full play to the guidance and assurance role of comprehensively running the Party strictly and integrate the improvement of the Party and state supervision system into plan implementation. We will improve the organizational system to feature top-to-bottom linkages and effective execution and improve the political ability and professionalism of leading groups and cadres at all levels so they can adapt to the new era and the new requirements, carry out reform, promote development, and maintain stability.*

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184 See for example at: http://english.www.gov.cn/policies/latestreleases/202011/03/content_WS5fa159efc6d0f7257693edc1.html (accessed on 15 February 2023).

Lower level FYPs also echo the leading role of the CCP. To provide an example, the National Informatization 14th FYP lays out the following guiding ideology and basic principles in its Section II[185]:

> *Deeply implement the spirit of the 19th Party Congress* [...], *persist in abiding by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, especially General Secretary Xi Jinping's important thoughts and instructions on a cyber superpower,* [...] *persist in the overall work style of* [...], *building a digital China as the overall objective* [...]. [W]*e will perfect innovation systems and development environments, comprehensively manage development and security, advance the modernization of the national governance system and governance capacities, strengthen the construction of a digital society, digital government,* [...] *and provide powerful drivers for the new march of building a modern Socialist country and the advance towards the second centenary struggle objective.*
>
> *Uphold the comprehensive leadership of the Party. Uphold and perfect structures and mechanisms for the Party to lead informatization development, strengthen the top-level design, comprehensive coordination, overall advance, and supervision of implementation of building a digital China, and provide fundamental guarantees for realizing the high-quality development of informatization.*

The FYPs and the manner in which the planning system and its implementation permeates the Chinese economy (see Chapter 4) represent however only one among the many tools which the CCP has at its disposal to steer the economy. Other means worth mentioning are the release of documents setting out long-term single issue horizontal policies that are considered by the CCP important across the economy. A pertinent example is the policy of indigenous innovation and technological advancement[186]. Furthermore, the CCP shapes China's economy through its full control over the financial system (see Chapter 6) and the corresponding possibility to deliver direct and indirect monetary support for selected areas of the economy, typically for sectors considered of strategic importance (see also Chapter 2)[187]. The available financial support for China's industrial policies significantly outsizes - in nominal terms as well as a share of gross domestic product '*GDP*' – the support offered by other large economies, and it features certain types of support not available to economic operators outside China[188].

Moreover, the CCP exercises informal, yet powerful influence over the country's economy that is over and above the powers conferred by laws, planning documents etc. This informal influence has a significant and real impact on the economy insofar as economic operators adjust their market conduct to CCP's signalling. It is rooted in the all-encompassing powers of the

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185 See Section II (1) and (2) of the Plan. The full text of the Plan is available at: https://digichina.stanford.edu/work/translation-14th-five-year-plan-for-national-informatization-dec-2021/ (accessed on 15 February 2023).

186 See Naughton, B. – *Six Factors behind China's Shift to „Grand Steerage"*, in Kennedy, S.; Blanchette, J. (ed.), p. 6-7.

187 See Batson, A. – *Some Facts about China's State Capitalism*, in Kennedy, S.; Blanchette, J. (ed.), p. 12-13.

188 See DiPippo, G.; Mazzocco, I.; Kennedy, S. – *Red Ink, Estimating Chinese Industrial Policy Spending in Comparative Perspective*, CSIS (2022), p. 22, 29-30.

CCP over the country. For example, economic operators know well what will be expected from them following a mere mentioning of a possible upcoming regulatory move in President Xi's latest speech or following a government action targeting a single market player or even a single individual. They try to read these signals correctly, i.e. that a certain behaviour is no longer acceptable for the CCP and if they do not align '*voluntarily*' they would be exposed to more coercive actions. In short, the CCP (in conjunction with the State apparatus) can enforce a certain behaviour by economic operators even without issuing any legally binding documents[189].

3.3.4. Broader Context of CCP's Economic Policies

The fact that significant portions of China's economy are private and may even operate in a highly competitive environment cannot alter the fact that this is accepted only to the extent it is not in conflict with the Party's agenda. In other words, the intervention into the economy is far from being limited to neutral regulation to address market failures. On the contrary, the goals underlying such intervention go significantly beyond. While a detailed description of these goals is of little or no relevance for this Report[190], they are ostensibly meant to contribute to the ultimate long-term goal of the '*great rejuvenation of the Chinese nation*', a notion invoked by President Xi since as early as 2012[191] and referred to in virtually all relevant legislative[192] and policy[193] documents.

The CCP considers the market-oriented approach to economic activity merely one ingredient among many, an ingredient which may be tested and tolerated when deemed useful by the Party (for example in certain non-strategic sectors) but which, when necessary, must give way to considerations of higher importance, such as political stability and control over the economy[194]. Moreover, principles that are compatible with a market-based allocation of resources or that set the framework such as rule of law, judicial independence or equal treatment based on the

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189 See Kennedy, S.; Blanchette, J. (ed.), p. 1.

190 See for example Kennedy, S.; Blanchette, J. (ed.), p. 2 or Grünberg, N. - *Party-state capitalism under Xi*, Section 1.

191 Berkeley, J. - Xi Jinping and the Chinese dream (2013), The Economist; available at: https://www.economist.com/leaders/2013/05/04/xi-jinping-and-the-chinese-dream (accessed on 15 February 2023).

192 See for example the Preamble of the Constitution: "[…] *We the Chinese people of all ethnic groups will continue* […] *to build China into a great modern socialist country that is prosperous, strong, democratic, culturally advanced, harmonious and beautiful, and realize the great rejuvenation of the Chinese nation.*"

193 See for example the introduction to the 2018 Government Reform Plan: "[…] *We must improve our efficiency and effectiveness, and actively construct a functional system of Party and state agencies with perfected systems, scientific norms, and high operational efficiency, to provide a powerful system guarantee for a decisive victory in establishing a well-off society in an all-round way, setting out on our new journey of building a modernized socialist country, and realizing the Chinese dream of the great rejuvenation of the Chinese nation.*"

194 See for example a 2023 NDRC article, according to which: "*We are developing a market economy under the leadership of the Communist Party of China and the socialist system, and we must never forget the term "socialism." To accelerate the improvement of the socialist market economic system, we must firmly adhere to the leadership of the Communist Party of China, firmly adhere to public ownership as the main body and the common development of various ownership economies, firmly adhere to distribution according to work as the main body and the coexistence of various distribution methods* […]". Available at: https://www.ndrc.gov.cn/xwdt/ztzl/srxxgcxjpjjsx/xjpjjsxjyqk/202301/t20230117_1346858.html (accessed on 18 April 2023).

application of non-discretionary rules exist in China in letter only or are expressly dismissed (see Section 3.1) as not compatible with the '*socialist system with Chinese characteristics*' and its core element, the leadership of the CCP[195]. Instead what matters is the CCP's nearly universal claim for "*overall leadership over all areas of endeavour in every part of the country*" (see Section 3.1), i.e. the CCP can and will instrumentalize large swaths of China's economy to pursue political goals[196].

3.4. CHAPTER SUMMARY

The CCP is the only governing party in China with its leadership role assigned by the Constitution. This leadership role covers all aspects of the State (such as armed forces or education) including – importantly for the purposes of this Report – the government apparatus (see Section 3.2.2) and personnel (see Section 3.2.3). The recent years have seen a growing integration between the State and the Party, making the structures of the Party and those of the State functionally indistinguishable. This integration entailed not only government reforms geared towards boosting the CCP's control over the State administration (see Section 3.2.2), but also an increasing tendency of the Party to inject itself directly into the corporate structures and the managerial decision-making of individual business operators, state-owned (see Section 3.3.1) and private (see Section 3.3.2) alike. Consequently, the CCP is in position to control the country's economy both by using the State institutions, as well as through other – more direct and informal – channels, in particular Party structures within enterprises.

Consequently, the CCP sets the economic agenda and controls all aspects of its implementation far beyond macroeconomic control or other common regulatory interventions, such as consumer or environmental protection. In fact, the CCP is in position to extend its control to the level of business decisions of individual enterprises and is willing to do so whenever deemed appropriate (see Section 3.3 and Section 2.3). Given the primacy of politics over economy in present day China, anything can become subject to regulation, depending on the Party's political agenda and economic or industrial policy priorities (see Section 3.3.4).

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195 See Crosby, D. C. – *Chinese State Capitalism and the Challenge of Systemic Interface with the Multilateral Trading System*, in Kennedy, S.; Blanchette, J. (ed.), p. 61-63.

196 See Grünberg, N. - *Party-state capitalism under Xi*, Section 2.

4. PLANNING SYSTEM

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4.1. INTRODUCTION

When China introduced its first FYP, it set out on a course of social and economic development strategies to set forth the country's economic targets and priorities every five years. China's 1st FYP which covered the period from 1953 – 1957 started the practice of planning and implementing successive FYPs, the latest adopted in March 2021. The first plan was largely modelled on the system of economic planning which was followed by the Soviet Union since 1928. The central objectives of the 1st FYP were the nationalization and rapid development of the industrial sector (in particular iron and steel, electric power, coal, heavy engineering, building materials, and basic chemicals) as well as the collectivization of agriculture.

Some seventy years later and with the 14th FYP in place, many aspects of the planning system in China have evolved and changed. While the earlier FYPs were characterized by prescribing very specific targets to achieve the given set of objectives, this has been largely replaced by guideline-like goals[197] in the recent plans[198], starting with the 11th FYP[199].

Even since the release of the 11th FYP, the substance of the plans has changed significantly. The structure of the plans has grown in complexity and emphasis has shifted to include conceptual goals which previously were not part of the planning or which were less in the focus of the planning process. The FYPs of the 14th planning cycle, for example, focus in part on green and low carbon development, as well as on security[200], general concepts that would have been somewhat out of place in previous plans.

Moreover, whereas the top-level FYPs outline broader objectives, more precise targets are generally specified in lower-level plans, i.e. provincial-, municipal- or even district-level FYPs. Additionally, an increasing number of industry targets that used to be explicitly set out in FYPs are now detailed in additional policy documents (see Section 4.2.1 below).

However, such gradual developments do not alter the very nature of the plans. China's formal plans are more than just strategic visions, they determine the direction of the Chinese economy, set out priorities and prescribe the goals which the central and local governments and their related bodies[201] must strive to implement, for example, through implementation plans, action plans and notices (see Section 4.2.1 for more details). This is understood by authorities at the corresponding levels of government, as well as by enterprises and industry associations, as FYPs frequently explicitly specify which authority, department or administration is in charge of its implementation. Because the formal evaluation of national, provincial, and municipal officials includes an assessment of effectiveness in implementing the plans, they have a strong incentive to devote time and resources to carrying them out.

4.2. Overview of the Chinese Planning System

4.2.1. Structure of the Planning System

The Chinese planning system forms a matrix encompassing virtually all economic activity in the country, as well as other areas, such as social welfare, environmental protection, technological research, the social credit system and education. In 2005, in the State Council's Several Opinions on Strengthening Drafting Work for the National Economic and Social Development Plan, the Government provided a '*three-by-three*' system to organize the plans. According to this system, plans are divided into three vertical divisions (national, provincial and municipal/county plans) and three functional divisions (comprehensive, macro-regional

197 Which distinguish between 'predictive' and 'mandatory' targets.

198 At least on the higher levels of state planning (see below in sections 4.2.5 and 4.2.6).

199 Melton, O., *China's Five-Year Planning System: Implications for the Reform Agenda, Testimony for the U.S.-China Economic and Security Review Commission*, 2015, p. 5.

200 See Grüberg, N.; Brussee, V. - *China's 14th Five-Year Plan – strengthening the domestic base to become a superpower*, MERICS, 9 April 2021; available at: https://merics.org/en/comment/chinas-14th-five-year-plan-strengthening-domestic-base-become-superpower (accessed on 11 August 2023).

201 Such as the national and local reform and development commissions.

and specialized plans)[202]. Under this rubric, the Chinese economy is extensively covered by a complex web of FYPs and accompanying policy documents.

The first point to note is that there is no publicly accessible single and comprehensive central or provincial repository of FYPs. Many FYPs are indeed officially published, but they are not always available on the relevant authorities' websites. Furthermore, not all plans are public and only a short summary is published by the relevant authorities.

The research undertaken for the update of this Report has also shown that while the 14th FYPs are often less specific compared to previous planning cycles, they are frequently complemented by implementing plans, action plans, guiding opinions, guidelines, notices etc. issued by central[203] and sub-central authorities. The evidence found shows in that respect that each sector of the economy analyzed in this Report is covered by a comprehensive constellation of such documents. Examples can be found in Chapters 12, 14, 15 or 16.

All this leads to the conclusion that FYPs remain at the core of the Chinese economy. Despite the lack of transparency surrounding some of them, there is solid evidence that FYPs cover the whole economic sphere – irrespective of the ownership type/structure of individual economic operators subject to the plans – and have a most pervasive effect on the economic activity in China, including on the sectors examined in this Report. Indeed, Chapter 3 provide further details on how private economic operators align their business conduct with the policies set by the CCP, including the policies outlined in the planning documents.

At the top of the entire system sits the central national plan (currently the 14th FYP), as well as some overarching strategies, such as the China Manufacturing 2025 plan ('*Made in China 2025*', see Section 4.2.3), the Belt and Road Initiative ('*BRI*', also '*One Belt One Road*' or '*OBOR*'), (see Section 4.2.4) and other medium and long-term strategic plans. With reference to the central FYP and the overarching strategies, hundreds of additional plans[204] are issued at various levels of government and at various points in time, forming eventually a matrix-like structure in which the subsequent / lower level plans further detail the pre-existing / higher level ones are aligned with them[205] and implement them (see Sections 4.2.1 and 4.2.2).

Table 4.1 below gives an overview of the planning system, including a list of a number of sectoral plans which have been adopted following the adoption of the 14th FYP. While this list is only illustrative (as mentioned above, planning covers virtually every economic activity with plans in place in the areas such as tourism industry, food safety, health information etc.) and in any event limited to the top layer within the structure of plans, it demonstrates the extent of the

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202 See Section 1.1 of Several Opinions on Strengthening Drafting Work for the National Economic and Social Development Plan, issued by State Council 22 October 2005; available at: https://www.gov.cn/gongbao/content/2005/content_121467.htm (accessed 11 August 2023).

203 See, for example, the Raw Materials Chapter of this report for several examples of lower level planning documents, complementing FYPs.

204 See Kennedy, S., *Impressions of the 13th FYP Proposal.* in: *State and Market in Contemporary China*, CSIS, 2016, p. 51.

205 One of the mechanisms to ensure consistency in the planning process is reviewing of lower administrative levels' draft plans of by higher level government bodies before adoption. See Taube, M. and Schmidkonz, C., *Assessment of the normative and policy framework governing the Chinese economy and its impact on international competition.* Think!Desk, 2015, p. 42.

Chinese planning system. Note also that this list is not exhaustive even as far as sectoral plans are concerned.

Table 4.1: Illustrative list of China's Planning System[206]

Overarching Strategies
Made in China 2025
BRI
FYPs
National FYPs
14th FYP
Sectoral Plans
Industry (sectors)
14th FYP on cultural industry development
14th FYP on developing the raw materials industry
14th FYP on the development of big data industry
14th FYP on developing fisheries
14th FYP on the development of medical equipment industry
14th FYP on new energy vehicles
14th FYP on the development of e-commerce
14th FYP on developing pharmaceutical industry
14th FYP on developing pesticide industry
14th FYP on information and communication industry
14th FYP on the development of robotics industry
14th FYP on developing scrap steel industry
14th FYP on developing civil aviation
Industry (issues)
14th FYP on fostering the development of small and medium-sized enterprises ('*SMEs*')
14th FYP on high quality development of foreign trade
14th FYP on human resources development and social security

206 Within the limitations mentioned above, the full text of the plans is available on the websites of the respective authorities which have issued the plans, typically the State Council, the NDRC, the relevant line ministries (such as the Ministry of Industry and Information Technology ('*MIIT*'), Ministry of Finance ('*MOF*'), Ministry of Agriculture) or other agencies (e.g. the National Energy Administration ('*NEA*')).

14th FYP on the green development of industry
14th FYP on the use of foreign investment
14th FYP on trade in services
14th FYP on agriculture and rural technology development
14th FYP on developing digital economy
14th FYP on ecological and environmental sci-tech innovation
14th FYP on the development of national high tech industry development zones
14th FYP on developing agriculture mechanization
14th FYP on boosting employment
14th FYP on building a national standardisation system fostering high quality development
14th FYP on circular economy
14th FYP on commerce development
14th FYP on promoting clean production
14th FYP on developing revitalisation of particular regions
14th FYP on implementing a high-quality development of the resources regions
14th FYP on building a modern circulation system
14th FYP on modernizing market surveillance
14th FYP on developing financial standardization
14th FYP Action plan on deepening the reform of price mechanism
14th FYP on developing crop planting at national level
14th FYP on supporting industrial transformation and upgrading of traditional industrial cities and resource-based city demo zones
14th FYP on the deep joint development of informatization and industrialisation
14th FYP on the development of intellectual property right ('*IPR*') protection and use
14th FYP on the development of smart manufacturing
14th FYP on the development of software and IT services
14th FYP on developing domestic trade
14th FYP on patents and trademarks examination
14th FYP action plan on high quality development of environmental protection equipment manufacturing

14th FYP on developing market supervision technology
14th FYP on developing modern logistics
14th FYP on implementing the domestic demand expansion
14th FYP on building Rule of law in China 2020-2025
14th FYP on informatization
14th FYP on sewage treatment and resource utilisation
14th FYP on standardization
Energy
14th FYP on developing new types of energy storage
14th FYP on a modern energy system
14th FYP on the development of renewable energy
14th FYP comprehensive working plan on energy saving and emission reduction
14th FYP on developing energy saving buildings and green buildings
Science and Technology
14th FYP on science and technology innovation in culture and tourism
14th FYP on science and technology innovation in transport
14th FYP on science and technology innovation in energy
14th FYP on railways science and technology innovation
Transportation
14th FYP on comprehensive transport services
14th FYP on developing green transport

The system is not strictly segmented along a fixed classification of industries/sectors[207]. Rather, the plans for specific sectors are complemented by plans which reflect the broader priorities of the leadership in a given planning period. Such priorities (e.g., '*innovation-driven development*', '*digitalization-based development*', '*green development*')[208] are in turn interlinked with additional objectives proclaimed by the Government. The special priorities are often threaded and expanded upon in successive FYPs.

The emphasis on SEIs is an example of a priority that flows through multiple successive plans. As such, it is present in Chinese policy making since at least 2010 and has evolved gradually as the Government keeps issuing new iterations of the Strategic Emerging Industries Key

207 Taube, M. and Schmidkonz, C., *Assessment of the normative and policy framework governing the Chinese economy and its impact on international competition.* Think!Desk, 2015, pp. 35-36.

208 See, for example, Parts 2, 5 and 11 of the 14th FYP.

Product and Services Catalogue[209]. As of writing of this Report, it covers eight sectors – next generation information technology, high-end equipment manufacturing, new materials, biotechnology, new-energy vehicles, new energy, energy efficient and environmental technologies, as well as digital innovation - and a ninth category covering related services. Those priorities and objectives are respected when the Government's guidance is translated into policies at lower levels of administration. The following provinces and municipalities have published 14th FYPs related to SEIs: Fujian, Guangxi, Guizhou, Hebei, Hunan, Jilin, Shanxi, Shandong, Dalian Municipality, Chongqing Municipality, Shanghai Municipality.

The same applies also to strategic objectives of the Government stemming from the overarching initiatives which exceed the regular planning system. The entire system (which in itself does not form a fixed structure but rather a constantly developing area of policy making, subject to reviews and adjustments) must be therefore understood as embedded in the wider context of the Chinese policy and decision-making which in turn feeds back into the planning process. Sub-plans, at the sectoral or provincial level are drawn up in reference to the national plans to ensure consistency and elaborated in accordance with the objectives of the national plans[210] (see Section 4.2.2 for more details).

The provincial Plans for Social and Economic Development and plans issued by lower-level governmental authorities can be found on the vertical axis of the planning matrix. Table 4.2 below contains a list of provincial plans adopted under the 14th FYP, as well as some examples of municipal plans.

Table 4.2: Plans for provinces and provincial-level municipalities and autonomous regions adopted in connection with the 14th FYP[211]

Provincial 14th FYPs
Anhui 14th FYP for economic and social development and 2035 perspectives
Beijing Municipality 14th FYP for economic and social development and 2035 perspectives
Chongqing Municipality 14th FYP for economic and social development and 2035 perspectives
Fujian 14th FYP for economic and social development and 2035 perspectives
Gansu 14th FYP for economic and social development and 2035 perspectives
Guangdong 14th FYP for economic and social development and 2035 perspectives

209 Full Catalogue available at: https://www.ndrc.gov.cn/xxgk/zcfb/gg/201702/W020190905485683837526.pdf (accessed on 11 August 2023). The current revised edition was published in February 2017 by NDRC together with the Ministry of Science and Technology, the Ministry of Industry and Information Technology and the Ministry of Finance. The eight/nine SEIs are further divided into 174 subcategories and 4 000 more detailed products and services.

210 Kennedy, S. and Johnson, K., *Perfecting China, Inc. The 13th Five-Year Plan*, CSIS, 2016, pp. 13-14.

211 Within the limitations mentioned above, the full text of the plans is available on the websites of the respective authorities which have issued the plans, typically the provincial governments.

Guangxi Autonomous Region 14th FYP for economic and social development and 2035 perspectives
Guizhou 14th FYP for economic and social development and 2035 perspectives
Hainan 14th FYP for economic and social development and 2035 perspectives
Hebei 14th FYP for economic and social development and 2035 perspectives
Heilongjiang 14th FYP for economic and social development and 2035 perspectives
Henan 14th FYP for economic and social development and 2035 perspectives
Hubei 14th FYP for economic and social development and 2035 perspectives
Hunan 14th FYP for economic and social development and 2035 perspectives
Inner Mongolia Autonomous Region 14th FYP for economic and social development and 2035 perspectives
Jiangsu 14th FYP for economic and social development and 2035 perspectives
Jiangxi 14th FYP for economic and social development and 2035 perspectives
Jilin 14th FYP for economic and social development and 2035 perspectives
Liaoning 14th FYP for economic and social development and 2035 perspectives
Liaoning Dalian Municipality 14th FYP for economic and social development and 2035 perspectives
Ningxia Autonomous Region 14th FYP for economic and social development and 2035 perspectives
Qinghai 14th FYP for economic and social development and 2035 perspectives
Shaanxi 14th FYP for economic and social development and 2035 perspectives
Shandong 14th FYP for economic and social development and 2035 perspectives
Shanghai Municipality 14th FYP for economic and social development and 2035 perspectives
Shanxi 14th FYP for economic and social development and 2035 perspectives
Sichuan 14th FYP for economic and social development and 2035 perspectives
Tianjin Municipality 14th FYP for economic and social development and 2035 perspectives
Tibet Autonomous Region 14th FYP for economic and social development and 2035 perspectives
Xinjiang Autonomous Region 14th FYP for economic and social development and 2035 perspectives
Yunnan 14th FYP for economic and social development and 2035 perspectives

Zhejiang 14th FYP for economic and social development and 2035 perspectives

Each such provincial-level plan is further detailed by respective sectoral plans issued by individual provinces and lower administrative levels, such as counties and municipalities. To give an example, Table 4.3 and Table 4.4 below contain a non-exhaustive list of plans related to the steel and aluminium industries on the central, provincial and local/municipal level.

Table 4.3: 14th FYPs and related policy documents on the central, provincial, and local/municipal level concerning the steel industry[212]

Central	Provincial	Local/Municipal
14th FYP 14th FYP on developing the raw materials industry 14th FYP on developing scrap steel industry 14th FYP on the green development of industry 14th FYP on promoting clean production Guiding Opinions on Promoting High-quality Development of the Steel Industry (2022)	**Hebei 14th FYP on economic and social development and 2035 perspectives** Hebei 14th FYP on Strategic and emerging industries development Hebei 14th FYP on high quality development of manufacturing industry Hebei 14th FYP on green development of industry Hebei 14th FYP several measures to speed up and foster high quality development of steel industry 2022 Hebei Province's Three-year action plan on cluster development in the steel industry chain 2020-2022	**Hebei Shijiazhuang Municipality 14th FYP on economic and social development and 2035 perspectives** Hebei Shijiazhuang Municipality 14th FYP on high quality development of manufacturing industry Hebei Handan Municipality Implementation Plan to speed up and promote the high-quality development of the steel sector 2022 Hebei Tangshan Municipality Iron and steel 1+3 action plan 2022

212 Within the limitations mentioned above, the full text of the plans is available on the websites of the respective authorities which have issued the plans.

	Shandong 14th FYP on economic and social development Shandong 14th FYP on the steel industry development Shandong 14th FYP on developing the construction materials industry Shandong 14th FYP on developing shipbuilding and marine engineering equipment Shandong Province Advanced Steel Manufacturing Industry Base Planning (2018—2025) **Liaoning 14th FYP on economic and social development** Liaoning 14th FYP on developing raw materials industry Liaoning 14th FYP on ecological economic development	Shandong Yingkou Municipality 14th FYP on developing the steel industry Shandong Qingdao Municipality 14th FYP on developing new and emerging industries **Liaoning Dalian Municipality 14th FYP on economic and social development (mentioning steel)** Liaoning Dalian Municipality 14th FYP on developing strategic and emerging industries Liaoning Dandong Municipality 14th FYP on industry development

Table 4.4: 14th FYPs and related policy documents on the central, provincial, and local/municipal level concerning the aluminium industry[213]

Central	Provincial	Local/Municipal
14th FYP 14th FYP on developing the raw materials industry 14th FYP on the green development of industry 14th FYP on promoting clean production	**Shandong 14th FYP on economic and social development** Shandong 14th FYP on the aluminium industry development Shandong 14th FYP 14th FYP on building a strong manufacturing province Henan 14th FYP on high quality development of manufacturing industry Henan 14th FYP on recycled metal industry Shanxi 2023 action plan for the transformation and upgrade of the non-ferrous metal sector Shanxi 2022 action plan for the transformation and upgrade of the non-ferrous metal sector Shaanxi 14th FYP on developing new materials industry	Liaoning Yingkou Municipality 14th FYP on the aluminium industry development Chongqing/Sichuan work plan to coordinate the extension of the aluminium industry chain 2023

213 Within the limitations mentioned above, the full text of the plans is available on the websites of the respective authorities which have issued the plans.

	Guangxi 14th FYP on economic and social development Guangxi Standing Committee of the People's congress decision on promoting the high-quality development of the aluminium industry 2022 **Yunnan 14th FYP on economic and social development** Yunnan 3-year action plan on developing green aluminium industry (2022-2024) and policy measures to support the development of a green aluminium industry Hubei 14th FYP on high quality development of new materials industry	

In addition, individual FYPs are also issued by entities which are formally not government bodies, such as state-run research institutes and SOEs. To provide an example, the state-owned steel producer Baowu, currently the biggest steel producer in the world (see Chapter 14), has drafted and implemented its own FYP[214]. Furthermore, industry associations, industrial parks and universities etc. may also draw up their own FYPs.

4.2.2. SUBSTANCE OF THE PLANS

As for substance of individual plans, the level of detail in terms of policy objectives, output targets, etc., tends to increase as the administrative level at which the respective plan was issued

[214] See interview with the Chairman of Baosteel Co., Ltd., available at: http://www.zgyj.org.cn/interview/6621102010.html or: https://finance.sina.com.cn/stock/hkstock/hkstocknews/2020-09-19/doc-iivhvpwy7677982.shtml (accessed on 11 August 2023).

decreases. The 14th FYP covers a vast array of topics ranging from economy, to culture, social welfare, environmental protection or issues of national defence and may therefore need to remain limited to setting broad overall priorities. Similarly, the overarching strategies may be more specific in some aspects (e.g. the Made in China 2025 only focuses on manufacturing industry) but will be formulated in a rather general manner for other reasons, such as their longer time horizon or their cross-cutting nature. However, the planning system taken in its entirety – covering all levels of government with an ever-growing precision concerning actions to be taken – sets China apart from mere programmatic declarations outlining the government's policies and priorities seen in other countries. While such programmatic declarations provide political legitimacy for the government's actions and ensure its accountability, the Chinese planning system is geared towards allowing manifold government interventions into the economy. Even though the section on guiding principles[215] in the 14th FYP does refer to the economic reforms which are supposed to make "*significant advances in reforming the property rights system and the market-based allocation of the factors of production*"[216], it only does so in the broader context of the socialist market economy[217] under the CCP's exclusive leadership[218]:

> *We shall adhere to and refine institutional mechanisms for the Party's leadership of economic and social development, adhere to and refine the system of socialism with Chinese characteristics, continue to raise capabilities and standards for implementing the new development concept and constructing the new development pattern, and provide fundamental assurance for achieving high-quality development.*

Indeed, virtually all the plans under the 14th FYP also refer to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era[219]. Even if the inclusion of these terms represent boilerplate, honorific language to some extent, stemming also from the fact that all official documents and actions are required to acknowledge the supremacy of Xi Jinping Thought and the primacy of the Party, they remain a clear reminder of the overall political and economic framework in which the planning documents are prepared and carried out.

Within the Chinese coordinated planning system, the form which specific government interventions will take follows the general rule of the higher-level plans setting broad outlines and overall targets and frequently specific authorities to enable lower-level units to achieve those targets, whereas the more practical aspects of how the centrally set goals should be achieved are specified in the plans at the lower levels. This central feature of the planning

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215 These principles are in one or another form part of all the related FYPs at the lower levels of administration.

216 See Chapter 3, section 2 of the 14th FYP.

217 *Ibid.*

218 See Chapter 2, Section 2 of the 14th FYP.

219 *Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era* is the current guiding ideology of the PRC, putting the Communist Party and socialist ideology at the core of the Chinese political system, as well as ensuring that decision-making power is centralized in the hands of the party, most notably through the General Secretary of the Chinese Communist Party and president of the PRC. See also: Buckley C., *Xi Jinping Thought Explained: A New Ideology for a New Era*, The New York Times, 26 February 2018; available at: https://www.nytimes.com/2018/02/26/world/asia/xi-jinping-thought-explained-a-new-ideology-for-a-new-era.html (accessed on 11 August 2023).

system, where initial broadly drawn guidelines gradually seep down the government structure and eventually take the shape of individual administrative measures on resource allocation, holds true also for the 14th planning cycle with overarching priorities and goals set out in the 14th FYP being translated into more specific targets and actions in the sectoral provincial plans.

Moreover, the coherence of lower levels of planning with the 14th FYP is maintained through the '*interpretation notes*' of the NDRC specifying the mechanisms and implementation of the 14th FYP. Note 43[220] outlines concrete steps to take to preserve coherence among various planning levels:

> *Focusing on the strategic priorities and main tasks identified in the* [14th FYP], *formulate and implement a number of national key special plans in the fields of science and technology innovation, digital economy, green development and ecology, and people's livelihood guarantees, and establish and detail the timetable and roadmap for the implementation of development tasks.* [...]
>
> *In accordance with the regional development strategic tasks determined in the* [14th FYP], *formulate and implement a batch of national-level implementation guidelines for regional plans* . [...]
>
> *When formulating and implementing local plans, the implementation of the development strategies, main objectives, key tasks, and major engineering projects set out in the* [14th FYP] *must be strengthened at all levels. It is necessary to improve the management mechanisms used for the plans such as catalogues and lists, drafting and filing, connection and coordination, to develop a list of national-level special plans and other catalogues for the 14th FYP period, to promote planning filing based on the national planning comprehensive management information platform, and ensure that the various plans are covered by a unified management.* [...]
>
> *It is necessary to establish a comprehensive coordination mechanism of plans; plans submitted to the Party Central Committee and the State Council for approval must be coordinated with the* [14th FYP] *before being submitted for approval, so as to ensure that national spatial plans, sectoral plans, regional plans and provincial development plans are in line with the* [14th FYP].[221]

4.2.3. MADE IN CHINA 2025

Made in China 2025 is a national strategic plan and industrial policy, issued by the CCP in May 2015. It is a comprehensive, long-term programme focused on manufacturing, with the main goal to shift Chinese manufacturing to higher value-added manufacturing, emphasizing in particular the use of innovative manufacturing technologies.

It targets ten sectors, for which strategic tasks and goals are specified, and the related government support measures laid down:

- advanced IT

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220 Available at: https://www.ndrc.gov.cn/fggz/fzzlgh/gjfzgh/202112/t20211225_1309731.html (accessed on 11 August 2023).

221 *Ibid.*

- aerospace and aeronautics
- agricultural equipment
- automated machines and robotics
- biopharma and medical products
- maritime equipment and shipping
- new-energy vehicles and equipment
- new materials
- power equipment
- rail transport equipment[222].

Made in China 2025 envisages three steps for the development of Chinese manufacturing. The first step aims to "*turn China into a major manufacturing power in ten years*", the second step, which should be implemented between 2025 and 2035 aims at China reaching "*intermediate level among world manufacturing powers*"[223], and in the third step, ending in 2049, China is supposed to achieve a more consolidated manufacturing sector which will allow China to "*transform* [itself] *into the global manufacturing leader before the centennial of the founding of New China*"[224]. To achieve the goal of becoming the global manufacturing leader, China is supposed to "*strengthen overall planning, ensure innovation-driven breakthroughs, set out specific policies, make the most of the system's advantages, mobilize all the society's forces to work hard, rely still more on domestic equipment, rely on domestic brands*"[225].

China is pursuing a policy of promoting these industries through various support measures, including the comparatively recent instrument of Government Guidance Funds ('*GGFs*') (see Chapters 5 and 6 for more details on GGFs, as well as an example of their practical implications for the New Materials industry in Section 12.3.2). These funds, created through collaborations between central and local governments and private venture capital firms, aim to invest in priority sectors chosen by the State, including SEIs. GGFs are intended to enhance the availability of capital for high-tech ventures that often face challenges in obtaining funding. Indeed, as of 2021, there were over 1800 GGFs, with a projected capital size of approximately USD 1.52 trillion[226]. In 2018, subsidiaries of the China Construction Bank ('*CCB*') contributed 5.3 billion Chinese Yuan ('RMB') to the Strategic Emerging Industry Development Fund which

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222 Many of them overlap with the 2010 SEIs (see also Section 4.2.1above). More specific goals and targets for individual industries, including time horizons for their achievement, are specified in the Made in China 2025 Roadmap ('*Made in China 2025 Roadmap*'), issued originally in 2015, available at: http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 21 August 2023) and updated in 2017; available at: https://www.gov.cn/xinwen/2018-01/29/content_5261911.htm; available at: http://www.cm2025.org/show-15-166-1.html (accessed on 5 June 2023).

223 See Made in China 2025, Section 2.3.

224 That is before 2049 – see Overview section of Made in China 2025. For intermediate steps which should have been achieved by 2020 and to be achieved by 2035 and 2049, respectively, see Made in China 2025, Section 2.3.

225 See Made in China 2025, Section 1.3.

226 *The Promise and Pitfalls of Government Guidance Funds in China*, The China Quarterly, pp. 1–21; available at: https://www.cambridge.org/core/journals/china-quarterly/article/promise-and-pitfalls-of-government-guidance-funds-in-china/9211F2954E797A29E82B540DA6D9A714 (accessed on 11 August 2023). *Understanding Chinese Government Guidance Funds*, March 2023, Center for Security and Emerging Technology; available at: https://cset.georgetown.edu/wp-content/uploads/CSET-Understanding-Chinese-Government-Guidance-Funds.pdf (accessed on 11 August 2023).

was jointly launched by CCB and NDRC[227]. CCB later created a sub-fund dedicated to the Made in China 2025 under the Strategic Emerging Industry Development Fund benefiting targeted industries[228].

The government support to achieve the overall goals of Made in China 2025 includes a number of measures, in particular financial support policies[229]:

We shall

- *deepen financial reform by widening manufacturing financing channels and reducing financing costs,* [...]
- *support Export-Import Bank of China to strengthen services for manufacturing "going out" within its scope of business,*
- *encourage the China Development Bank to increase loans for manufacturing Enterprises,*
- *lead financing institutions to develop products and business for manufacturing Enterprises,* [...]
- *lead venture capital and private equity to support manufacturing sector innovation.*

Furthermore, there are preferential fiscal and taxation policies listed in the document[230]:

We shall

- *make full use of present channels to strengthen financial support and the policy environment for manufacturing with a focus on key areas for manufacturing transformation, namely intelligent manufacturing,* [...]
- *innovate the support way of fiscal fund by transforming from subsidizing construction to subsidizing operation step by step and increase the effectiveness of financial fund,*
- *deepen technology planning (special projects and funds), technology management reform, and manufacturing technology research and demonstration projects to support technology innovation and structural adjustment,*
- *perfect and implement government purchasing policies supporting innovation* [...].

Made in China 2025 refers to deepening reforms and giving markets the decisive role in allocating resources[231], as known from other contexts (see Chapter 5). However, the strategy remains top-down driven, relying on heavy government intervention in favor of domestic producers ("*we shall strengthen planning*", "*we shall encourage enterprises*", "*we shall support*

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227 See *Announcement on Contribution by Subsidiaries to Strategic Emerging Industry Development Fund*; available at: http://www.ccb.com/en/newinvestor/upload/20181128_1543386176/20181128142101603123.pdf (accessed on 11 August 2023).

228 See at http://fund.eastmoney.com/data/xininfo_001825.html (accessed 21 August 2023).

229 See Made in China 2025, Section 4.3.

230 *Ibid.*, Section 4.4.

231 *Ibid.*, Section 2.2.

enterprises")[232] (see also Chapter 7) which would be carried out by using the above support measures and would result in non-market outcomes, etc. Consequently, the ultimate goal - namely for China to become one of the world's most advanced and competitive economies, with domestic firms being globally competitive, while gradually substituting foreign technology with local technology – was not meant to be implemented based on market forces. The MIIT guidelines on industrial upgrade (Made in China 2025) project funding (departmental budget)[233] published in August 2017 only confirm this by emphasizing that within the goal of fully implementing the Made in China 2025 strategy, "[f]*unding support* [shall be] *allocated in principle to sectors that cannot get funding from the market and need national-level support*"[234]. Because of international criticism directed at Made in China 2025, Chinese officials began to publicly discuss the plan less frequently over time[235], though there is no evidence that the country backed away from the plan's goals and targets. It is widely believed[236] that the Government has reduced the public mentioning of Made in China 2025 in order to downplay the plan's significance and impact on resource allocation. Such adjustments in the rhetoric surrounding the programme did result in a decreased number of direct references to Made in China 2025 in company filings and other available data, making also the assessment of its effects more difficult[237]. Nevertheless, the overall objectives remain the same, especially reducing the dependence of Chinese industries on foreign technologies and inputs, through a narrative on developing high quality manufacturing, using distortive instruments[238] and the impacts of Made in China 2025 are estimated to be significant, as apparent not least from the strong growth of the sectors covered by the programme as a proportion of China's GDP[239].

Central and sub-central authorities have also issued specific policies to implement the overarching Made in China 2025 plan. For example, central government agencies issued a total of 11 guidelines related to Made in China 2025 implementation[240]. Other policy documents

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232 *Ibid.*, Part III. The mechanism of how the generally worded goals of the strategic initiatives are translated into more specific targets in plans on lower administrative levels is described further below, see in particular Sections 4.2.9 and 4.2.10

233 Available at: http://www.caam.org.cn/chn/9/cate_103/con_5210981.html (accessed on 11 August 2023).

234 *Ibid.*

235 McBride, J. & Chatzky, A. (2019). *Is 'Made in China 2025' a threat to global trade*? Council on Foreign Relations. https://www.cfr.org/backgrounder/made-china-2025-threat-global-trade (accessed on 3 March 2023).

236 See *Evolving Made in China 2025. China's industrial policy in the quest for global tech leadership*, Merics, 2 July 2019; available at: https://merics.org/en/report/evolving-made-china-2025 (accessed on 11 August 2023) and Holland T., *Beijing's 'Made in China 2025' plan isn't dead, it's out of control*, 8 April 2019, available at: https://www.scmp.com/week-asia/opinion/article/3004900/beijings-made-china-2025-plan-isnt-dead-its-out-control (accessed on 11 August 2023).

237 See for example Branstetter, L. G. and Guangwei, L. – Does „Made in China 2025" work for China? Evidence from Chinese listed firms; (2022), NBER Working Paper Series; available at: https://www.nber.org/system/files/working_papers/w30676/w30676.pdf (accessed on 11 August 2023)

238 *Ibid.*

239 See for example Economic Power Play: Assessing China's Trade Policies (2021), The Economist Intelligence Unit; available at: https://impact.economist.com/perspectives/sites/default/files/economic_power_play_assessing_chinas_trade_policies_0608.pdf (accessd on 11 August 2023)

240 These guidelines include (i) implementation guidelines for five big projects, including constructing a national manufacturing innovation center, developing a strong industrial foundation, promoting intelligent

implementing Made in China 2025 include, for example, *Several Opinions on the Financial Sector's Support for Steady Growth, Structural Adjustment, and Performance Improvement in the Industrial Sector*[241] or the *Guiding Opinions on Financial Support for Building a Strong Manufacturing Country*[242], which instructed financial institutions to provide financial support, such as loans and financing, to the manufacturing industry.

Sub-central governments also issued their own plans to implement Made in China 2025. Examples include the *Made in China 2025 Action Plans* issued by Jiangsu[243], Zhejiang[244], Beijing[245], Shanghai[246] and Shenzhen[247]. These local action plans set strategic goals, identify regional key areas and major projects to be developed and describe the measures and tools to achieve the goals.

4.2.4. BELT AND ROAD INITIATIVE

The BRI, initially floated by President Xi in autumn 2013, represents another strategic government program, focusing primarily on infrastructure projects that would span a significant number of countries around the globe. On 28 March 2015, NDRC, the Ministry of Foreign Affairs (*'MFA'*), and the Ministry of Commerce (*'MOFCOM'*), with State Council authorization, issued the One Belt One Road Action Plan, which provides further details[248]. *While the Action Plan states that BRI overall "aims to promote the connectivity of Asian, European and African continents and their adjacent seas", it leaves no doubt that the initiative is closely linked to China's strategy of internationalization and becoming a global industrial leader: "China shall stay committed to the basic policy of opening-up, build a new pattern of*

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manufacturing, promoting green manufacturing, and promoting high-end equipment innovation; (ii) two special action guidelines for developing service-oriented manufacturing and improving the quality and brand of equipment manufacturing and (iii) four development and planning guidelines for the new materials industry, information industry, pharmaceutical industry, and highly skilled personnel in the manufacturing sector. MIIT (2017). *'Made in China 2025' '1+X' Planning System Released*; available at: http://www.gov.cn/xinwen/2017-02/10/content_5167126.htm (accessed on 11 August 2023).

241 PBOC (2016). *Several Opinions on Financial Sector's Support for Steady Growth, Structural Adjustment, and Performance Improvement in the Industrial Sector*; available at: http://www.gov.cn/xinwen/2016-02/16/content_5041671.htm (accessed on 11 August 2023).

242 MIIT (2017). *Guiding Opinions on Financial Support for Building a Strong Manufacturing Country*; available at: http://www.gov.cn/xinwen/2017-03/30/content_5181983.htm (accessed on 11 August 2023).

243 Jiangsu Provincial Committee and Jiangsu Provincial People's Government (2015). *'Made in China 2025' Jiangsu Province Action Plan*; available at: https://www.waizi.org.cn/policy/64745.html (accessed on 11 August 2023).

244 Zhejiang Provincial People's Government (2015). *'Made in China 2025' Zhejiang Province Action Plan;* available at: https://www.zj.gov.cn/art/2016/1/19/art_1229019364_63912.html (accessed on 11 August 2023).

245 Beijing Municipal People's Government (2015). *'Made in China 2025' Beijing Action Plan;* available at: http://kw.beijing.gov.cn/art/2015/12/29/art_2384_2478.html (accessed on 11 August 2023).

246 Shanghai Municipal People's Government (2016). *'Made in China 2025' Shanghai Action Plan*; available at: https://jjyx.sheitc.sh.gov.cn/uploadfiles/File/20161026181827609.pdf (accessed on 11 August 2023).

247 Shenzhen Municipal People's Government (2015). *'Made in China 2025' Shenzhen Action Plan*; available at: http://www.sz.gov.cn/zfgb/2016/gb946/content/post_4997315.html (accessed on 11 August 2023).

248 Full text available at: http://english.gov.cn/archive/publications/2015/03/30/content_281475080249035.htm (accessed on 11 August 2023).

all-around opening-up, and integrate itself deeper into the world economic system. The Initiative will enable China to further expand and deepen its opening-up"[249].

The Action Plan lists various cooperation modalities among participating countries[250]. However, it also contains a dedicated section on the role of China and its regions in the BRI context: *"China shall fully leverage the comparative advantages of its various regions, adopt a proactive strategy of further opening-up, strengthen interaction and cooperation among the eastern, western and central regions, and comprehensively improve the openness of the Chinese economy"*[251]. It is in particular this section which fits into the scheme of the Chinese planning system, as it sets specific policy goals and priorities for individual areas. For example, with respect to the north and north-west regions, the Action Plan states that[252]:

> [...] we *shall make good use of Xinjiang's geographic advantages and its role as a window of westward opening-up to deepen communication and cooperation with Central, South and West Asian countries, make it a key transportation, trade, logistics, culture, science and education center* [and] *we should give full play to Inner Mongolia's proximity to Mongolia and Russia* [...] *and advance the construction of an Eurasian high-speed transport corridor linking Beijing and Moscow with the goal of building key windows opening to the north.*

Or, with respect to coastal regions[253]:

> *We shall use opening-up to motivate these areas to carry out deeper reform, create new systems and mechanisms of open economy, step up scientific and technological innovation, develop new advantages for participating in and leading international cooperation and competition, and become the pacesetter and main force in the BRI.*

And concerning the inland regions[254]:

> *We shall build Chongqing into an important pivot for developing and opening up the western region, and make Chengdu, Zhengzhou, Wuhan, Changsha, Nanchang and Hefei leading areas of opening-up in the inland regions.* [...] *We shall support inland cities such as Zhengzhou and Xi'an in building airports and international land ports.*

While Made in China 2025 is different from the five-year planning cycle due to its time horizon and focus on manufacturing industry, in the case of BRI, it is its international scale and focus on infrastructure which distinguishes it from the usual FYPs. At the same time, BRI forms part of the entire planning system, insofar as it contains the familiar features of the Chinese economic plans, in particular putting emphasis on selected sectors or actions (including by envisaging support for such actions) which the local governments and local officials are required to take into account when setting their local policies via their respective plans and policies. Indeed, the 14th FYP itself dedicates a whole chapter called "*Promote high-quality*

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249 See Action Plan, Part I.
250 Such as facilities connectivity, unimpeded trade or financial integration.
251 See Action Plan, Part VI.
252 *Ibid.* Concerning Xinjiang, see also Section 13.9
253 Action Plan, Part VI.
254 *Ibid.*

'Belt and Road' development" [255] to the BRI, and local governments such as Beijing have published action plans on the BRI[256], which further emphasize the development and strengthening of BRI structures.

It is important to note that while the notion of '*opening-up*' features frequently in the BRI Action Plan, *the focus is rather on supporting the Chinese industry in expanding abroad, in line with the policy of creating a set of internationally competitive national champions (see Section 5.5.1) and going global (see for example Section 14.1.1).* Through the BRI, the Government is also seeking to improve the security of raw materials supply. Chinese investments in Africa have, for example, targeted natural resources, trade-facilitating transport and power infrastructure, also in light of growing demand for resources and energy consumption for the Chinese economy[257]. The 14th FYP confirms this growing trend: "*We shall persist in* [...] *going global with China's investments, make efficient use of global resources* [and] *promote the improvement of industrial competitiveness*"[258].

However, the BRI has faced numerous failures and controversies. One significant concern has been the inadequate quality of work associated with some BRI projects and their corresponding long-term sustainability and effectiveness[259]. Another controversy revolves around the debt repayment conditions imposed on recipient countries. One the one hand, critics have questioned the transparency and fairness of the loan agreements, arguing that China's lending practices under the BRI have in some cases created debt dependency[260], while on the other hand, an argument also exist that the level of debt induced by BRI project was to a degree an unintended consequence of the expansive lending policy of Chinese banks, rather than representing a distinctive policy of the Government[261]. Furthermore, the import of Chinese labour for BRI projects in some countries has been a point of contention. Many recipient countries have witnessed a significant influx of Chinese workers, limiting employment opportunities for local labour force and contributing to social tensions. This aspect has raised questions about the initiative's impact on local communities and their economic

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255 See 14th FYP, Chapter 41.

256 See, for example, *Notice on the Issuance of Beijing's Action Plan for Promoting the High-quality Development of the "Belt and Road" (2021-2025)*; available at: https://www.beijing.gov.cn/zhengce/zhengcefagui/202112/t20211219_2564427.html (accessed on 11 August 2023).

257 See, for example: *Ethiopia - A new horizon for African - Chinese relations*, The Economist Intelligence Unit, 9 August 2022; available at: https://country.eiu.com/article.aspx?articleid=762341459 (accessed on 11 August 2023).

258 14th FYP, Chapter 13, Section 2.

259 *China's Global Mega-Projects Are Falling Apart*, The Wall Street Journal, 20 January 2023; available at: https://www.wsj.com/articles/china-global-mega-projects-infrastructure-falling-apart-11674166180 (accessed on 11 August 2023).

260 *It's a (Debt) Trap! Managing China-IMF Cooperation Across the Belt and Road*, CSIS, 17 October 2018; available at: https://www.csis.org/analysis/its-debt-trap-managing-china-imf-cooperation-across-belt-and-road (accessed on 11 August 2023).

261 See for example How China's Belt and Road Initiative is changing after a decade of big projects and big debts (2023), Associated Press; available at: https://apnews.com/article/china-belt-road-initiative-a4b08290cf94e4f2dffe368a013c5129 (accessed on 11 August 2023).

development[262]. Environmental concerns have also emerged as a significant issue associated with the BRI when the construction and operation of infrastructure projects have resulted in environmental degradation[263]. As a result of these failures and controversies, there has been a negative shift in perception regarding the BRI and Chinese influence[264].

4.2.5. 14TH FYP

The 14th FYP is the top-tier planning document, aimed at providing general guidance on policies on all administrative levels. Unlike previous central FYPs, the 14th FYP does not contain concrete targets for overall GDP growth and only mentions a limited number of quantitative targets[265]. The wording of individual chapters in the 14h FYP is also kept open and flexible. For instance, the first chapter is dedicated to the overall goals and directives for the 14th planning period, whilst outlining the achievements under the 13th FYP. The chapter highlights the successful completion of the 13th FYP's objectives, acknowledging the need to steer development goals towards high-quality development, address imbalances, enhance innovation capacity, and improve social governance[266]:

> *China has shifted directions toward a phase of high-quality development* [...] *At the same time, the imbalance and insufficiency in our development is still prominent, and the reform tasks to be done in key areas and key links are still arduous. Our capacity for innovation is insufficient for the requirements of high-quality development. The agricultural base is relatively weak. The disparities in development and income distribution between rural and urban regions remain stark. We have a long way to go in environmental protection, there are shortcomings in livelihood protection, and weaknesses in social governance.*

It further, as required for all official documents of this type emphasizes the role of CCP ideology and leadership in the planning and decision-making process[267]. Correspondingly, the "*guiding ideologies, principles, and strategic orientations*"[268] for the 14th five-year period, drawn-up in the next chapter of the 14th FYP, put socialism with Chinese characteristics at the core of the planning system, confirming that the Chinese authorities will "[...] *deeply implement the spirit of the 19th Party Congress and the Second, Third, Fourth, and Fifth Plenums of the 19th CCP*

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262 *Who Built That? Labor and the Belt and Road Initiative*, Council on Foreign Relations, 6 July 2021; available at: https://www.cfr.org/blog/who-built-labor-and-belt-and-road-initiative (accessed on 11 August 2023).

263 *Belt and Road Economics: Opportunities and Risks of Transport Corridors*, The World Bank, 18 June 2019; available at: https://www.worldbank.org/en/topic/regional-integration/publication/belt-and-road-economics-opportunities-and-risks-of-transport-corridors (accessed on 11 August 2023).

264 *Global trends in countries' perceptions of the Belt and Road Initiative*, Bruegel, 25 April 2023; available at: https://www.bruegel.org/sites/default/files/2023-04/WP%2004_0.pdf (accessed on 11 August 2023). *What Happened to the Belt and Road Initiative?*, The Diplomat, 6 September 2022; available at: https://thediplomat.com/2022/09/what-happened-to-the-belt-and-road-initiative/ (accessed on 11 August 2023).

265 *China's 14th Five-Year Plan – strengthening the domestic base to become a superpower*, Merics, 9 April 2021; available at: https://merics.org/en/comment/chinas-14th-five-year-plan-strengthening-domestic-base-become-superpower (accessed on 11 August 2023).

266 14th FYP, Chapter 1, Section 2.

267 *Ibid.*, Chapter 1, Section 1.

268 *Ibid.*, Chapter 2, Introduction.

Central Committee"[269]. Chapter 2 of the 14th FYP also further elaborates on the principles that must be followed by all Chinese entities subject to FYPs, most notably on the Party's total leadership: "*We shall adhere to and refine institutional mechanisms for the Party's leadership of economic and social development, adhere to and refine the system of socialism with Chinese characteristics* [...]"[270]. The document then goes on to outline the main goals for the 14th five-year period, as well as the long-term goals for 2035 in Chapter 3[271]:

> *Fresh progress in economic development will be made.* [...] *Development must adhere to the new development concept.* [...] *We shall strengthen the domestic market, further optimize the economic structure, and significantly improve our capacity for innovation. The* [research and development ('*R&D*')] *expenditure of society as a whole will increase by more than 7% annually* [...]. *We shall further refine the socialist market economy and basically complete construction of a high-standard market system, and market players shall be more energetic; significant advances shall be made in reforming the property rights system and the market-based allocation of the factors of production* [...].

The following parts and chapters of the 14th FYP outline various policies, goals and targets that remain core to the development of the Chinese economy, such as the development of science and technology, as specified in Chapter 4[272]:

> [We] *shall promote the optimization and combination of innovation systems guided by the strategic needs of the state and accelerate the construction of strategic* [science and technology] *power under the leadership of national laboratories* [...].
>
> [We] *shall increase the intensity of financial investment in basic research, optimize the expenditure structure, implement tax incentives to encourage enterprises to invest in basic research, encourage society to invest through multiple channels such as donations and fund establishment, form a continuous and stable investment mechanism, and raise the proportion of basic research funding as a portion of R&D funding to over 8%.*

The next chapter outlines various mechanisms and policies used by the Government to promote innovation and technological advancement[273]:

> *We shall strengthen universally beneficial policy support, such as granting an extra deduction of R&D expenses and offering tax incentives for high-tech enterprises. We shall expand and optimize the insurance compensation and incentive policies for the first unit (set) of major technical equipment, give play to the leading and demonstrative role of major projects, and use government procurement policies to support innovative products and services.* [...] *We shall improve assessment systems that encourage R&D by SOEs* [...]. *We shall improve preferential tax policies that*

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269 *Ibid.*, Chapter 2, Section 1.
270 *Ibid.*, Chapter 2, Section 2.
271 *Ibid.*, Chapter 3, Section 2.
272 *Ibid.*, Chapter 4, Sections 1 and 3.
273 *Ibid.*, Chapter 5, Section 1.

encourage innovation by small- and medium-sized scientific and technological enterprises.

Chapter 8, titled "*Deepen the implementation of the manufacturing powerhouse strategy*", also focuses industrial development with the Chinese authorities intending to[274]:

> [O]*ptimize the layout of regional production chains, guide the key links of production chains to remain in China, and further enhance the capacity of the central and western regions and the northeast region as destinations of industrial relocation.* [...] *We shall implement the pilot enterprise cultivation project and cultivate a group of leading enterprises that possess core competitiveness and can dominate in their respective ecosystems. We shall support SMEs to enhance their professional advantages and foster specialized and new "little giant" enterprises*[275] *and single product champion enterprises in the manufacturing industry.*

And further[276]:

> *It is crucial to build more secure, resilient, and efficient modern supply chains not subject to disruptions and outside interference. It is also crucial to ensure that the share of manufacturing in the economy remains stable, and to enhance the competitive advantages of the manufacturing sector with a focus on quality improvement.*

Indeed, the policy goals for manufacturing in the period of 2021-2025 demonstrate a strong focus on manufacturing. The objective is to enhance China competitiveness by establishing and strengthening comprehensive domestic supply chains across various sectors such as technology, high-speed railways, power equipment, renewable energy, and ship manufacturing. A notable focus is placed on diversifying supply chains to reduce reliance on foreign actors, as well as preserving crucial industrial chains within the country, aiming to counter the ongoing migration of certain industries to other regions, such as Southeast Asia[277].

In line with this strategy, the 14th FYP emphasizes the development of SEIs, outlining that the Government will[278]:

> *focus on seizing opportunities for future industrial development, cultivate leading and pillar industries, promote the integrated and ecosystem-driven development of strategic emerging technology clusters, so that the contribution of such industries to GDP will exceed 17%.*

Further, the Government intends to[279]:

> *focus on strategic emerging industries such as new generation information technology, biotechnology, new energy, new materials, high-end equipment, new energy vehicles, green and environmentally friendly products, and aerospace and*

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274 *Ibid.*, Chapter 8, Section 2.
275 See Section 2.3.2
276 *Ibid.*, Chapter 8, Introduction.
277 *Manufacturing makes a comeback in the 14th five-year plan*, The Economist Intelligence Unit, 17 March 2021; available at: https://www.eiu.com/n/manufacturing-makes-a-comeback-in-the-14th-five-year-plan/ (accessed on 11 August 2023).
278 14th FYP, Chapter 9, Introduction.
279 *Ibid.*, Chapter 9, Section 1.

marine equipment, accelerate the innovation and application of key and core technologies, enhance the country's capacity of ensuring supply of productive factors, and cultivate new driving forces for industrial development ...; promote projects to develop China's strategic emerging industry clusters, improve the mechanisms for organization, management and professional promotion of industrial clusters, build public service complexes for innovation, and build a number of strategic emerging industry growth engines with distinctive characteristics, complementary advantages, and reasonable structures. We shall encourage technological innovation and enterprise mergers and restructuring and we shall prevent low-quality and redundant construction. We shall give full play to the guiding role of industry investment funds and increase the strength of financing guarantees and risk compensation.

In his Report on the Work of the Government in March 2023, the then Prime Minister Li Keqiang announced that the Government invested RMB 740 billion on major 14th FYP projects in 2022[280].

Part 6 of the 14th FYP is dedicated to the role of government authorities, including an emphasis on the role of the state sector and SOEs[281]:

To better serve national strategies, we shall make plans on where to advance and where to withdraw, what to do and what not to do, accelerate the layout optimization, structural adjustment, and strategic reorganization of the state-owned sector, enhance the competitiveness, innovation, control, influence, and anti-risk capabilities of the state-owned sector, and strengthen and optimize state-owned capital and SOEs. We shall give full play to the strategic supporting role of the state-owned sector, encourage the state-owned sector to focus more on helping to ensure strategic security, promote industry leadership, bolster the national economy, raise people's living standards, improve public services, and other functions. We shall adjust and revitalize inventory assets, optimize the allocation of incremental capital, concentrate on important industries that are related to national security and the lifelines of the national economy, concentrate on important industries related to the national economy and the people's livelihoods, such as those involved in the provision of public services, emergency capacity building, and public welfare, and concentrate on forward-looking strategic emerging industries.

Part 17 of the 14th FYP outlines the goal of consolidating the socialist democracy, the rule of law (see Section 3.2.2) concerning the concept of rule of law in present-day China) and the Party and State supervision system, stating that the government: "[...] *shall adhere to the organic integration of the leadership of the Chinese Communist Party, the running of the country by the people, and the rule of law, and promote the self-refinement and development of*

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280 See *Report on the Work of the Government*, 15 March 2023; available at: http://english.www.gov.cn/news/topnews/202303/15/content_WS64110ba2c6d0f528699db479.html (accessed on 16 August 2023).

281 *Ibid.*, Chapter 19, Section 1.

socialist political system with Chinese characteristics."[282] And further: "*We shall adhere to and improve the Party's leadership system that takes full control over the overall situation and coordinates across all parties and implement the Party's leadership in the development of all aspects of the nation*"[283]. Correspondingly, the 14th FYP states that the Chinese authorities will "*unswervingly follow the path of socialist rule of law with Chinese characteristics,* [...] *make efforts to pursue parallel progress in the rule of law for national governance, exercise of state power, and government administration, build a country under the rule of law, a government under the rule of law, and a society under the rule of law* [...]"[284] and that the supervision role of the Party over the implementation of the 14th FYP needs to be strengthened[285]:

> *We shall improve the supervision system characterized by the Party's unified leadership, comprehensive coverage, and authoritative and efficient oversight, and form a political power operation mechanism featuring scientific decision-making, resolute execution, and strong supervision. We shall ensure that leadership and oversight responsibilities for strict self-governance are properly assumed, strengthen political supervision, and deepen political inspections and strengthen the implementation of rectification. We shall promote the coordination of disciplinary action, supervisory mechanism, dispatched resident teams, and inspections, take inner-party supervision as the leading factor and promote the coordination of various types of supervision, form a normal and long-lasting supervisory force, and better integrate the supervision system into the national governance system. We shall deepen the reform of the discipline inspection and supervision system, strengthen the leadership of higher-level supervisory committees for discipline inspection over lower-level supervisory committees for discipline inspection, promote standardized and rule-of-law-based discipline inspection and supervision work, and give full play to their role of oversight in ensuring implementation and promoting improvement and development.* [and] *construct a full-coverage responsibility and supervision system.*

The final part of the 14th FYP, part 19, outlines the binding nature of the plan, outlining the implementation modalities and calling upon all industries to ensure successful application. It emphasizes the need to strengthen organization, coordination, and supervision of plan implementation, as well as establish monitoring and evaluation mechanisms. The language used suggests that adherence to the plan is expected. The plan further assigns responsibilities, sets indicators, and tasks, and allocates resources to regions and departments. It emphasizes the importance of timely completion, achievement of objectives, and a favorable policy environment. In summary, the 14th FYP requires comprehensive implementation at all levels of administration, with clear responsibilities, monitoring mechanisms, and alignment with annual goals and tasks (see further in Section 4.3.1, as well as for example Sections 14.1.2 or 16.3.1)[286].

4.2.6. SECTORAL PLANS AT NATIONAL LEVEL

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282 *Ibid.*, Part 17, Introduction.
283 *Ibid.*, Chapter 58.
284 *Ibid.*, Chapter 59.
285 *Ibid.*, Chapter 60.
286 *Ibid.*, Part 19.

At the level of national sectoral plans, the general goals and targets of the 14th FYP become more specific, taking the form of measures such as[287]:

a) General governmental control over industry sectors: market entry conditional upon complying with efficiency targets set in the respective plan (see Chapter 12); upgrading the industrial base coupled with phasing out outdated production (see Section 14);
b) Quantitative and qualitative development targets: setting improvement targets for various productions parameters, for instance annual labour productivity, material quality, ratio in which certain inputs are to be used or energy consumption, level of R&D expenditures (see Section 14.1.1, see further Section 4.2.10);
c) Governmental control over production capacity: specific methods of capacity control are envisaged in relevant sectors; these include also addressing the issue of overcapacity, e.g. by the effective withdrawal of low-efficiency production capacities or developing upstream and downstream alliances (see Section 14.1.1, see further Section 15.2.3);
d) Control of geographical industry distribution in China: specific industries are earmarked for being developed in or re-located to certain areas in line with other governmental policies (see in particular Section 14.1.1; see further Section 12.2.2); enterprises located in certain areas are encouraged to expand further (see Section 16.2.3);
e) Interventions into the structure of enterprises: specifying what type of enterprises in terms of size and ownership structure should be active in a given sector (see Chapter 12), envisaging consolidation of industrial sectors through mergers (see Section 5.5.1), sometimes explicitly aimed at reducing competition (see Section 14.1.1); support for setting up industrial alliances (see Chapter 12.3.1);
f) Development of specific industries: support being envisaged for industrial sectors manufacturing products identified by the plans (see for example Chapters 12, 14 or 16);
g) Governmental steering of private initiatives: this is referred to as '*guiding*' private capital into sectors selected by the Government (see Chapter 6); establishing GGFs from private and public sources to invest in key industries (see Chapter 6); CCP control and leverage over privately owned enterprises (see Chapter 3).
h) Industry support measures: financial support from the government to selected industries / industrial activities (see Chapter 12); encouraging cooperation between the financial sector and manufacturing industry (see Chapter 6); instructions to lower level of administration to explore possibilities to support selected industries (see Section 14.1.1); mechanisms to lower energy costs for selected industrial users (see Chapter 10 and further Section 15.5);
i) Ensuring security of supply: measures to support development of domestic industry in a given sector are envisaged for supply chain stability, such as the steel industry (see Chapter 14).

Just as the 14th FYP requires all government officials and their departments to carry out its implementation, the sectoral national plans also provide for rigorous implementation by relevant authorities (see for example, Section 12.2.1.1concerning the implementation of the 14th FYP on Developing Raw Materials Industry). In addition, sectoral industry associations can be

287 But not limited to.

given the task of identifying potential issues of the plan's implementation and formulating corresponding policy suggestions (see Section 4.3.3 and Section 14.7).

4.2.7. PROVINCIAL GENERAL PLANS

Similar to the sectoral plans, the provincial plans provide more details on how the objectives of the 14th FYP should be translated into policies within individual provinces. By way of example, in the 14th FYP on Economic and Social Development and 2035 Perspectives of the Shandong Province[288] the following types of government intervention measures can be found:

a) General governmental control over industry sectors: "*encourage enterprises, universities, scientific research institutes and industry parks to share resources, collaborate to innovate and jointly build industry and technology innovation alliances, comprehensive service centers for small and medium-sized enterprises, parks gathering science-related education and industry-related education parks as well as bases for effective study and training*"[289].

b) Quantitative and qualitative development targets: "[*S*]*ignificantly increase the coverage of R&D activities of industrial enterprises above a certain size and achieve full coverage of R&D institutions in large industrial enterprises.* [...] *Implement the "doubling" plan for national high-tech enterprises and science and technology SMEs and gradually cultivate more "single-area champions", "gazelles" and "unicorns"* [...] *By 2025, the number of national high-tech enterprises and the number of science and technology SMEs shall reach 25,000 and 30,000 respectively*"[290].

c) Detailed production targets: "*By 2025, all coal mines in the province shall implement smart mining, the province's coal production shall be stabilized at about 100 million tons; the total power generation installed in the province shall reach 190 million kilowatts approximately* [...] *the installed power generation based on renewable energy in operation shall exceed 80 million kilowatts, and the scale of installed nuclear power generation in operation shall reach approximately 13 million kilowatts, the amount of power received from outside the province shall exceed 150 billion kWh; the length of the natural gas pipeline network shall reach 8,500 kilometers, and the liquefied natural gas' coastal loading and unloading capacity shall reach about 25 million tons per year*"[291].

d) Governmental control over production capacity: "[E]*nsure that the comprehensive grain production capacity is stabilized at 550 billion kilograms and ensure the security of supply of important agricultural products. Ensure coordination and adjustment of grain and feed planting structure, improve the production, purchase, marketing, storage and transportation systems, and deepen implementation of high-quality grain projects* [...]"[292].

e) Control of geographical industry distribution in the province: "[D]*rive the grouped development of suburban new cities, achieve industry-city integration* [...] *support all municipalities and districts to promote the differentiated positioning and cluster*

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288 See Shandong 14th FYP on Economic and Social development and 2035 Perspectives, available at: https://www.ndrc.gov.cn/fggz/fzzlgh/dffzgh/202105/P020210513602621066980.pdf (accessed on 16 August 2023).

289 *Ibid.*, Chapter 10.

290 *Ibid.*

291 *Ibid.*, Chapter 53.

292 *Ibid.*, Chapter 24.

development of manufacturing industries based on their specific resources and industrial bases"[293]. Furthermore: "[The Shandong government] *shall build three 'golden corridors.'*" For example, the Jinang-Qingdao corridor for science, innovation and manufacturing shall *"take the "Jinan-Zibo-Weifang-Qingdao-Yantai-Weihai" line as the main axis, enhance long-term technological advantages and product standard discourse power in industrial internet, railways equipment, marine engineering equipment, hydrogen energy, new energy and new materials, health care, modern agriculture and other key areas, and create a world-class advanced manufacturing cluster zone*"[294].

f) Interventions into the structure of enterprises: "*Through the introduction of new methods for creation, integration and reorganization, etc. cultivate a group of backbone enterprises and high-growth enterprises* [...]. *Promote the establishment of industry alliances, strengthen vertical connections and consistency as well as horizontal joint interaction to form industrial clusters worth RMB 100 billion, RMB 500 billion, and RMB 1 trillion. Cultivate specialized and specific new "little giant" enterprises and individual champion enterprises in the manufacturing industry, foster the transformation of "individual business into enterprises" and of "small enterprises into large scale enterprises", and form a pattern of coordinated development of numerous leading enterprises, large enterprises and SMEs*"[295].

g) Development of specific industries: The Shandong Province 14th FYP earmarks a number of key industrial parks and enterprise clusters for transition and upgrade and lists a number of selected projects in these sectors:
   - *"High-end equipment manufacturing: Qingdao Rail Transit Key Equipment Industrial Park, Qingdao Laixi Aviation Industrial Park, Weifang Magnetic Levitation Power Equipment Industrial Park* [...]
   - *Automobile Manufacturing: Qingdao Laixi New Energy Vehicle Industry Cluster, Geely High-end Commercial Vehicle Production Capacity Integration and Improvement and Automotive Industrial Park, Rizhao Great Wall Automobile Industrial Park* [...]
   - *High-End Chemicals: Yulangdao Refining and Chemical Integration Project, Wanhua Ethylene, Dongying Weilian Chemical Paraxylene Project* [...]
   - *New Energy: China Northern Wind Power Mother Port Industrial Park, China Aerospace New Energy Industrial Park, China National Defense Power Battery Industrial Park* [...]
   - *New Materials: National Rubber and Tire Engineering Technology Research Center Functional New Materials Indistrial Park Project, China Xinfa Green Aluminium Deep Processing Wisdom Industrial Park, Dongying Rare Earth New Materials Industrial Park* [...]
   - *Biomedicine: Qilu Pharmaceutical Biomedical Industrial Park, Huaxi Biological Life and Health Industrial Park, Zibo Yellow River Delta Pharmaceutical Valley Industrial Park* [...]"[296].

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293 *Ibid.*, Chapter 33.
294 *Ibid.*, Chapter 32.
295 *Ibid.*, Chapter 15.
296 This list is not exhaustive. See Shandong 14th FYP on Economic and Social Development and 2035 Perspectives, Chapter 15, Table 3.

h) Governmental steering of private entities: "*By 2025, the number of national high-tech enterprises and science and technology-based SMEs shall be increased to 25,000 and 30,000 respectively*"[297].

i) Industry support measures: "*Cultivate local multinational companies with both domestic and foreign operations, strong international competitiveness and risk prevention capabilities, support export companies to expand their domestic market* [...]"[298].

In addition to the FYPs, provinces also outline planned government support in other documents, such as in the lists of key investment projects. Such compilations of projects may reflect not only the priorities of the respective central and provincial FYPs but can also be based on the strategic initiatives (such as, for example, Made in China 2025) and other relevant policy guidelines by the central authorities. Using again the example of Shandong, the province has established a list of key investment projects in January 2022[299]. The list introduces two categories of key projects at the provincial level in the fields of industry, science and technology, infrastructure and social livelihood[300]. It counts 600 projects, subdivided into two categories of 449 and 151, respectively, effectively representing a list of companies and projects earmarked for support from the provincial government in accordance with the guidelines and goals of the 14th FYP, as illustrated by the below examples:

Group 1: Projects to be implemented (449 projects/enterprises)

- Precision metal components: Aitam Alloy (Shandong) Co., Ltd. (Project Nr. 180)
- Metallurgy: Jinan Magang Steel Pipe Manufacturing Co., Ltd. (annual output of 200 000 tons of high-grade spiral welded pipes, 1 200 sets of production equipment) (Project Nr. 85)
- Battery Industry: Shandong Lizhong New Energy Materials Co., Ltd. (annual output of 18 000 tons of lithium hexafluorophosphate, 8 000 tons of lithium bisfluorosulfonimide, and 35 000 tons of fluoride salt) (Project Nr. 195)
- Transport: Xiongshang High-speed Railway Shandong Section Project (Project Nr. 2)
- Solar Energy: Shandong Energy Offshore Land, Wind, Solar Storage Multi-energy Complementary Clean Energy Base Project (Project Nr. 11)
- Electronics: New Focus Automotive Technology Holdings Co., Ltd. New Focus Automotive Electronics Manufacturing Production Base Project (annual output of 10 million pieces of vehicle inverters, multi-functional mobile power supplies, etc.) (Project Nr. 97)
- New materials: Yantai Donghua New Materials Co., Ltd. maleic anhydride and special resin engineering project (annual output of 100 000 tons of maleic anhydride, 5 000 tons of multifunctional special epoxy resin, and 8 680 tons of cycloaliphatic epoxy resin) (Project Nr. 141)
- Bio-industry: Yantai Panelo Biotechnology Co., Ltd. (Project Nr. 148)

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297 *Ibid.*, Chapter 10.

298 *Ibid*, Chapter 22.

299 Available at: http://www.shandong.gov.cn/art/2022/1/20/art_107851_117019.html (accessed on 16 August 2023).

300 Available at: https://www.yuncheng.gov.cn/doc/2022/03/28/217627.shtml (accessed on 16 August 2023).

- Energy saving and environmental protection: Shandong Jishun Energy Saving Building Materials Co., Ltd. Nano Thermal Insulation New Material Project (Project Nr. 243)
- New energy sources: Shandong Ruiyang New Energy Technology Co., Ltd. (Project Nr. 287)
- Equipment manufacturing: Qingdao Saijie Aviation Technology Co., Ltd. Saijie Aviation Equipment Manufacturing Project (Project Nr. 96)
- Chemical industry: Shandong Hengyuan Petrochemical Co., Ltd. (Project Nr. 255)
- Construction: Jinan Yaoqiang International Airport Phase II Reconstruction and Expansion Project (Project Nr. 12)
- Energy: Caijin National Energy Urban Heating Main Network and Supporting Projects (Project Nr. 74)

Group 2: Projects currently in preparation (151 projects/enterprises)

- Advanced manufacturing equipment: Shandong Shengtong Steel Cord Co., Ltd. (annual output of 150 000 tons of precision wire by intelligent manufacturing) (Project Nr. 62)
- Electronics and IT: Weifang Xingming Optoelectronics Technology Co., Ltd. OLED substrate project (Project Nr. 85)
- New materials: Zibo Qinding Changchang Special Steel Technology Co., Ltd. (Project Nr. 43)
- Battery Industry: Shandong Shanhai New Materials Co., Ltd. lithium battery material-carbonate project (Project Nr. 52)
- Bio-industry: Blue Molecule (Qingdao) Biotechnology Co., Ltd. International Pharmaceutical Industrial Park Project (Project Nr. 38)
- Energy saving and environmental protection: Shandong Qilu Huaxin Hi-tech Environmental Protection New Materials Co., Ltd. (Project Nr. 41)
- New energy sources: Zhongqi Holding Group Co., Ltd. photovoltaic new energy module and distributed photovoltaic power station project (Project Nr. 13)
- Equipment manufacturing: Zaozhuang Hualong Garment Co., Ltd. intelligent equipment manufacturing construction project (Project Nr. 57)
- Metallurgy: Zibo Qinding Changchang Special Steel Technology Co., Ltd. (Project Nr. 43)
- Chemical industry: Shandong Xinhecheng Refining Technology Co., Ltd. (Project Nr. 81)
- Construction: Wudi Hongji Construction and Development Co., Ltd. Lubei Four Ports Linkage Multimodal Transport Intelligent Logistics Center Project (Project Nr. 139)
- Energy: Advanced Nuclear Energy Research Base of Tsinghua University (Rongcheng) (Project Nr. 137)
- Transport: CSTC Standard Technical Service Co., Ltd. (Project Nr. 132)[301].

China's official newspaper confirmed in November 2022 that the Shandong government has completed the annual investment plan related to key projects in the province, citing the advanced construction of the Dezhou Hengyuan Petrochemical High-end Carbon Material

[301] Available at: http://www.shandong.gov.cn/art/2022/1/20/art_107851_117019.html (accessed on 16 August 2023).

Industrial Park, the acceleration of administrative procedures in the Xinfa Modern Agricultural Industrial Park project, a total investment of RMB 4.09 billion in the Hengyuan Petrochemical High-end Carbon Material Industrial Park for the production of needle coke, for ultra-high power graphite electrodes and also other power battery anode materials, as well as construction of facilities and a total investment of RMB 5 billion in the Xinfa Modern Agricultural Industrial Park. The provincial Development and Reform Commission ('*DRC*') has also stated that a total of over RMB 411 billion has been invested in Shandong key projects, exceeding the annual investment plan by 3.1%, that a special bond quota of RMB 306.9 billion had been issued at the beginning of 2022 and that a new balance bond limit of RMB 40 billion had been targeted at Shandong key projects[302].

The lists of key investment projects constitute one of the points where the policy settings of the plans are subsequently implemented through the actual allocation of financial resources by the government. Even though a considerable portion of the investment is likely to be spent on projects which are not objectionable in the context of this Report (infrastructure, housing), the language of the lists of key investment projects shows equally clearly that the interventionist toolkit of setting development targets, supporting selected industrial sectors, control over geographical distribution of industry etc. remains in place to promote goals outlined in the general provincial plan and the higher-level plans.

4.2.8. PROVINCIAL SECTORAL PLANS

The 14th FYP (2021-25) on Developing Steel industry in Shandong Province (the '*14th Shandong FYP on Steel*', see also Chapter 14) provides an example of how the policy objective and targets are passed from the national level onto the next level of administration. Following a review of the achievements under the 13th FYP, the plan identifies main developments and main problems for the upcoming five-year period, such as the need to increase the proportion of high-end steel for special use, especially in the automobile, marine, rail and engineering machinery industry[303]:

> *The output value of high-end steel products in automobile, shipbuilding, marine engineering, rail transit, and engineering machinery industries accounts for less than 8%. The supply of special steel and stainless steel is way below the demand level. The supply of high-end bearing steel, gear steel, die steel, military steel, 300-series stainless steel, household appliance plate, and marine engineering steel still relies on other provinces or foreign countries.*

In its next section, the general idea of the plan is outlined as follows[304]:

> [Shandong shall]

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302 Available at: http://sd.people.com.cn/n2/2022/1111/c166192-40190483.html (accessed on 16 August 2023).

303 Shandong 14th FYP on Steel Industry Development, Chapter 1, Section 2; available at: http://gxt.shandong.gov.cn/module/download/downfile.jsp?classid=0&filename=1f79d908601e479f83707e67b133e347.pdf (accessed on 16 August 2023).

304 *Ibid.*, Chapter 2, Section 1.

- *Deeply implement Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, firmly establish a new development concept, integrate it into the new development pattern, and implement the requirements of high-quality development;*
- *take the supply side structural reform as the main direction and improving the competitiveness of steel industry in all respects as the goal;*
- *strictly control production capacity and output, optimize industrial layout, strengthen innovation drive and promote green development to build an advanced steel manufacturing base with first-class domestic market competitiveness and international influence;*
- *establish a modern steel industry system and accelerate the transformation from a large steel province into a strong steel province*

The main development goals in terms of industrial scale include[305]:

1. Industry competitiveness. During the 14th Five Years Plan period, the income of main businesses shall increase by about 10% on average annually and the proportion of short-process steelmaking shall reach about 20%. The labor productivity of steel enterprises shall double to 1 500 tons per person per year. A modern steel industry system with an optimized structure, improved quality and efficiency, environmental protection awareness and strong competitiveness shall be initially formed.

2. Industrial layout. Cities such as Jinan (except Laiwu and Gangcheng District), Zibo, Liaocheng, Binzhou, Weifang serving as transmission channels and those along Qingdao-Jinan route shall cut their production as much as possible. The proportion of steel production capacity in Qingdao Dongjiakou, Rizhao Lanshan, Linyi Lingang and other coastal areas shall be increased so as to exceed 70%.

3. Product structure. By 2025, the total output value of the steel smelting, rolling, deep processing and distribution industry shall exceed RMB 1 trillion, among which high-end high-quality steel will account for 50%, the high-quality deep processing 25%, and scrap steel in steel raw materials about 30%.

4. Technological innovation. R&D investment in steel products shall account for more than 3% of the main business income. Ten enterprise technological centers at provincial-level and 2-3 technological centers at national level shall emerge. Every year, breakthroughs shall be made in three to five key areas including in steel materials known as short slab, hydrogen metallurgy, non-blast furnace ironmaking, clean steel smelting, endless rolling and other cutting-edge technologies.

The subsequent chapters list a number of key steel products to support, including high-end stainless steel and steel used for high-end equipment, marine engineering, rail transit, household appliances, military, and engineering machinery [306], as well as the development of industrial

305 *Ibid.*, Chapter 2, Section 3
306 *Ibid.*, Chapter 4, Section 1.

chains[307] in key regions of Shandong[308]. The plan also outlines a number of quantitative goals and specific projects[309]:

> [Shandong shall]
> - *strive to build two major steel production bases along the coast and inland with governmental support, with environmental protection as a driving force, with strict standard control, production capacity replacement, mergers and reorganizations and other means* [...]
> - *give full play to the advantages of Rizhao, Qingdao Dongjiakou, and Linyi Lingang in resources and logistics and vigorously foster the transfer of inland production towards coastal areas* [...].
> - *promote cooperation among leading enterprises in the province, take the two major steel production bases as the core to establish a scrap recycling network with multi-point layout and regional radiation, and jointly build a platform for comprehensive utilization of scrap resources in a closed-loop development mode with the integration and docking of online information flow, capital flow, offline logistics and business flow. By 2025, scrap steel shall account for about 30% of steel raw materials and become an important source for raw materials for the steel industry in Shandong province.*

The final section of the 14th Shandong FYP on Steel contains a set of measures to safeguard the achievement of goals set out in the previous sections. Such measures include general ideas of strengthening organizational leadership, increasing policy support, fostering talent and improving the level of workforce skills, deepening international cooperation, leveraging industry associations[310] as well as a range of measures which make it possible for the Shandong government to directly intervene into the industry, including[311].:

> [*S*]*trengthen the joint working mechanism for the high-quality development of the province's steel industry, strengthen coordination between administration departments and establish links between different levels, clarify the division of responsibilities, formulate relevant policies for integrated industrial development, review major projects, coordinate on major problems, and supervise the implementation of the Plan. All relevant cities and the two major steel bases shall formulate local development plans for steel industry in their respective regions based on realities, speed up the implementation of key projects and orderly cut out inefficient production capacity. implementation, supervision, inspection, evaluation and assessment mechanism shall be improved to ensure the effective implementation of the plan, strengthen the monitoring of industrial economic operations and accurately grasp the situation of the steel industry.*
>
> [I]*implement various national policies and measures to support steel industry and subsequent high-quality and deep processing industries, make good use of the*

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307 *Ibid.*, Chapter 4, Section 3.
308 *Ibid.*, Chapter 3.
309 *Ibid.*, Chapter 3; Chapter 3, Section 1 and Chapter 5, Section 2.
310 *Ibid.*, Chapter 8.
311 *Ibid.*, Chapter 8, Sections 1 and 2.

package of policies for major projects, support the leading steel enterprises and major projects and provide such guarantees as financial incentives, land supply, tax preferential treatment and technological innovation. Implement R&D and supporting policies for high-end steel products and accelerate independent innovation and industrialization of brand products. [...]

Similar structures in terms of development objectives, industry upgrading, and project support can be observed in other provincial sectoral plans. For instance, in the 14th FYP on High-end Development of Chemical Industry of Jiangsu[312] (see further Section 16.3.1), similar efforts are made to enhance the production and quality of chemical products to meet industry demands, optimize the industrial layout and foster the construction of industry facilities. Likewise, in the 14th FYP on High Quality Development of Manufacturing Industry of Fujian[313] (see further Section 12.2.1.1), strategies are formulated to promote the technological upgrade of materials, enhancing the overall competitiveness of the industry, and ensure a stable supply of raw materials for various industries. Furthermore, 14th FYP for Industry and Informatisation Development in Guangzhou[314] (see further Section 19.3.2.2) highlights plans aimed at advancing the manufacturing capabilities of semiconductor materials and components, supporting the growth of the semiconductor industry in Guangzhou. These examples demonstrate the widespread adoption of similar planning structures and objectives in various provincial sectoral plans throughout China. They mark the coordinated approach taken by the Government to guide and support regional development, ensuring the alignment of policies and targets at different administrative levels.

4.2.9. INDUSTRIAL RESTRUCTURING – DECISION NO. 40

The Decision of the State Council Regarding Promulgating the Implementation of Interim Provisions on the Promotion of Industrial Restructuring ('*Decision No. 40*')[315] is very important in the context of China's industrial restructuring. Published in 2005 as an implementing measure of the 11th FYP, Decision No. 40 remains in force. It covers all areas of the economy including agriculture, transport, environment, development of manufacturing industry, high-tech industry and the service industry. Chapter III of Decision No. 40 provides guidance with regard to achieving the goal of industrial restructuring by setting out how the Guidance Catalogue for Industrial Structure Adjustment (which is an implementing measure of Decision No. 40 applicable to enterprises within China, and which was issued in four successive versions in 2005, in 2011 - amended 2013 - , in 2019, and in 2024, effective as of 1 February 2024[316])

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312 14th FYP on high-end development of chemical industry of Jiangsu; available at: http://gxt.jiangsu.gov.cn/art/2021/8/25/art_83673_10000511.html (accessed on 13 October 2023).

313 14th FYP on High Quality Development of Manufacturing Industry of Fujian; available at: https://huanbao.bjx.com.cn/news/20210707/1162695.shtml (accessed on 16 August 2023).

314 14th FYP for Industry and Informatisation Development in Guangzhou; available at: https://www.gz.gov.cn/zwgk/fggw/sfbgtwj/content/post_8319334.html (accessed on 16 August 2023).

315 Decision of the State Council Regarding Promulgating the Implementation of Interim Provisions on the Promotion of Industrial Restructuring No. 40; available at: www.asianlii.org/cn/legis/cen/laws/tpopisa783/ (accessed on 16 August 2023).

316 The first Guidance Catalogue for the Structural Adjustment of Industry was issued in 2005 (NDRC, Order [2005] No. 40, issued on 2 December 2005). The 2024 edition of the Guiding Catalogue is available at:

and the Guidance Catalogue for Foreign Invested Industries (applicable to foreign funded enterprises) is formulated[317]. In this context, Decision No. 40 states that the Guidance Catalogue for Industrial Structure Adjustment will divide industrial sectors into '*encouraged*', '*restricted*' and '*eliminated*'[318] categories. The sectors within each of the categories are described in broad terms e.g., in the encouraged category[319]:

> *The encouraged category mainly includes the key technologies, equipment and products to have important promoting functions to economic and social development, to conducive to resource saving, environmental protection, and industrial structure optimization and upgrading, and require to be encouraged and supported by policies and measures.*

Inclusion of a sector in the '*encouraged*' sector clearly implies preferential treatment[320]:

> *The encouraged investment projects shall be examined, approved, ratified or archived in accordance with the relevant provisions of the state on investment administration. All financial institutions shall provide credit supports in compliance with credit principles. The equipment imported within the total amount of investments for self-use, except for the commodities listed in the "Catalogue of Non-tax-free Imported Commodities for Domestic Investment Projects (Amended in 2000)" promulgated by the Ministry of Finance, shall still be exempted from customs duties and import value-added tax, and shall, after the new provisions such as the catalogue of investment projects on non-exempted tax have been promulgated, be governed by such new provisions. As for other preferential policies on encouraged industry projects, the relevant provisions of the state shall be applied*

As regards the '*eliminated*' category[321], investment is prohibited with clear instructions regarding the actions to be taken to ensure no such investment takes place[322]:

> *Investments are prohibited from being contributed to projects under the eliminated category. All financial institutions shall stop various forms of credit granting supports to such projects and take measures to take back the granted loans. All localities and departments as well as the relevant enterprises shall take powerful measures to eliminate such projects within the prescribed time limit. The state price administrative department may, within the time limit for elimination, raise the electricity price. No production technique, equipment or product to be eliminated*

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https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/202312/t20231229_1362999.html (accessed on 9 January 2024).; an English translation of the 2019 edition of catalogue is also available on the website of the Australian trade defence authority at: https://www.industry.gov.au/sites/default/files/adc/public-record/exhibit_d16.1_-_catalogue_for_guiding_industry_restructuring_-_en.pdf (accessed on 16 August 2023).

317 Decision No. 40, Chapter 3, Article 12.

318 *Ibid.*, Article 13.

319 *Ibid.*, Article 14.

320 *Ibid.*, Article 17; emphasis added.

321 *Ibid.*, Article 16, according to which this category „*mainly include*[s] *the outdated industrial arts and techniques, equipment and products which do not conform to the relevant law and regulations, seriously waste resources, pollute environment, do not meet the work safety conditions and need to be eliminated*".

322 *Ibid.*, Article 19.

by the state by explicit order may be imported, transferred, produced, sold, used or adopted.

New investments in the 'restricted' category are prohibited with clear guidelines on how this is to be pursued[323].

The new investments project under the restricted category shall be prohibited. The investment administrative department shall not examine, approve, ratify or archive the projects under the restricted category. No financial institution shall grant loans for such projects, and no administrative department of land administration, urban planning, construction, environmental protection, quality inspection, fire prevention, customs, or industry and commerce, etc. shall handle the relevant procedures for such projects.

Decision No. 40 also sets outs the repercussions for failure to comply with the provisions under both the restricted and eliminated categories[324]:

[Restricted]: *In case of any violation of the provisions to carry out construction based on investment or financing, the relevant entities and persons shall be subject to liabilities.*

[Eliminated]: *If any enterprise violates the provisions, its persons directly held liable and the relevant leaders shall be subject to liabilities in accordance with the law.*

Decision No. 40 further states that the Guiding Catalogue for Industrial Structure Adjustment, is an important basis for guiding investment directions. It guides the government to administer investment projects, and to formulate and enforce policies on public finance, taxation, credit, land, import and export[325].

Accordingly, the Guidance Catalogue itself and the inclusion of various industrial areas into one of the three categories, reflects the industrial policy preferences of the Chinese authorities at various points in time. Concerning the 2024 edition of the catalogue, the NDRC emphasized the following policy objectives behind the Guiding Catalogue, fully corresponding to the Government's overall priorities, in particular those of industrial upgrade, technological self-reliance, as well as green innovation[326]:

(1) Promote the high-end, intelligent and green manufacturing industry. Continue to enhance the core competitiveness of the manufacturing industry, promote quality improvement and brand building, and continue to guide the industry towards the mid-to-high end. With intelligent manufacturing as the main focus , we shall promote industrial technological transformation and further optimization , accelerate the promotion and application of new intelligent manufacturing technologies, and promote the transformation of the manufacturing industry model. Encourage green technology innovation as well as the development

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323 *Ibid.*, Article 18.
324 *Ibid.*, Articles 18 and 19.
325 Decision No. 40, Chapter 3, Article 12.
326 See at: https://www.gov.cn/zhengce/202312/content_6923484.htm (accessed on 9 January 2024).

of green environmental protection industries, promote energy conservation, carbon reduction and green transformation in key sectors, and resolutely curb the blind development of high energy consumption, high emissions and low-level projects.
(2) Consolidate the leading position in advantageous industries. Accelerate the transformation and upgrading of traditional industries, increase the proportion of advanced production capacity, and effectively expand high-quality supply. Resolve excess production capacity and eliminate backward production capacity in accordance with laws and regulations. Vigorously develop and expand strategic emerging industries, accelerate the development of the digital economy, proactively layout future industries, and build a new engine for industrial development. [...]

(3) [...] *Accelerate the realization of high-level scientific and technological self-reliance and, following the national strategic needs, gather strength to carry out original and leading scientific and technological research, and resolutely win the battle in the field of key core technologies. Accelerate the reconstruction of industry bases as well as the work on major technical equipment and improve the security of supply of strategic resources.*

4.2.10. SUBSTANCE OF PLANS – SUMMARY

The above description and examples demonstrate the essential features of the Chinese planning system in terms of substance, namely that broadly formulated industrial policy goals from the higher-level plans are reflected and translated into more specific targets and implementing measures with each successive plan at the respective level below.

When looking at the entirety of the planning system in China, it becomes apparent what the general notions of the 14[h] FYP effectively mean. The concept of *'promot*[ing] *the high-quality development of the manufacturing industry'* (see Section 4.2.5.) is turned into a list of individual product / product ranges in selected industrial sectors earmarked for preferential development by the government authorities (see Section 4.2.6). The mention of '*enhanc*[ing] *the competitive advantage of the manufacturing industry'* (see Section 4.2.5) or the '*introduction of new construction, integration and reorganization,* [to] *cultivate a group of backbone enterprises and high-growth enterprises* [...] *and promot*[ing] *the establishment of industry alliances'* (see Section 4.2.5) effectively aims at eliminating competition through regrouping, reorganization and relocating of industries. Finally, '*increas*[ing] *investment in and support for manufacturing resources*', as well as '*coordinat*[ing] *and arrang*[ing] *funds to support the construction of major industrial projects in the manufacturing industry*' (see Section 4.2.5) points towards availability of various support policies and tools, not least financial, for the selected projects and sectors (see Sections 4.2.6 and 4.3.3).

4.3. IMPLEMENTATION OF PLANS

4.3.1. BINDING NATURE OF PLANS

The status and importance of the plans in the economic governance of China is recognized and addressed in the Constitution which attributes the power to approve the central FYP to the NPC. According to the Constitution[327]:

> *The National People's Congress shall exercise the following functions and powers:*
>
> [...] *reviewing and approving the plan for national economic and social development and the report on its implementation.*

And further[328]:

> *The National People's Congress Standing Committee shall exercise the following functions and powers:*
>
> [...] *when the National People's Congress is out of session, reviewing and approving partial adjustments to the plan for national economic and social development and the state budget that must be made in the course of implementation.*

Accordingly, the 14th FYP was adopted in March 2021 by the NPC[329]. Preparing the draft FYP for the legislator's approval is the task of the State Council, as stipulated in Article 89 of the Constitution[330]:

> *The State Council shall exercise the following functions and powers:*
>
> [...] *drawing up and implementing plans for national economic and social development and state budgets.*

Despite this strong constitutional backing, Chinese sources would sometimes claim that the plans lack a binding character[331], mainly because they do not have a place in the ranking table of authoritative legislative documents under the Legislation Law of the PRC[332].

However, the fact that the FYPs (or the overarching strategies) do not have a precisely defined status within the Chinese legal order does not undermine their important role in guiding the direction of the economy. Neither does it put in question their binding nature which transpires from other pieces of legislation, such as the Organic Law of the Local People's Congresses and Local People's Governments of the PRC[333]. This law unequivocally obliges said authorities to implement the FYPs. Its Article 11 reads as follows:

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327 See Article 62 of the Constitution; available at : http://www.npc.gov.cn/englishnpc/constitution2019/201911/1f65146fb6104dd3a2793875d19b5b29.shtml (accessed on 16 August 2023).

328 See Article 67 of the Constitution.

329 Available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 16 August 2023).

330 See Article 89 of the Constitution.

331 Kennedy, S., Johnson, K., *Perfecting China, Inc. The 13th Five-Year Plan*, CSIS, 2016, p. 1.

332 Available at: http://www.npc.gov.cn/npc/kgfb/202303/eb5e0e60ff5f43f7a3bfa2a10bbee6ba.shtml (accessed on 16 August 2023). See in particular Chapters 2-4.

333 Available at: http://www.npc.gov.cn/npc/kgfb/202203/0ff47fbc69b443e3b9a99bef91adcb26.shtml (accessed on 16 August 2023). See further on the binding nature of the 14th FYP: *Key issues for China's 14th Five Year Plan*, The Oxford Institute for Energy Studies, March 2021; available at: https://www.oxfordenergy.org/wpcms/wp-content/uploads/2021/03/Key-issues-for-Chinas-14th-Five-Year-Plan.pdf (accessed on 16 August 2023). See also further on the achievement of FYP targets under FYP: Kennedy S., *China's Planners Succeed, but What About China?*, CSIS, 11 November 2020; available at: https://www.csis.org/blogs/trustee-china-hand/chinas-planners-succeed-what-about-china (accessed on 16 August 2023).

The local People's congresses at or above the county level shall exercise the following powers and functions: [...]

(1) ensure, within their respective administrative areas, the observance and execution of the Constitution, laws, administrative regulations and resolutions of the People's congresses at higher levels and their standing committees, and ensure the implementation of national plans and state budgets; [...]

(2) examine and approve the outlines of plans for national economic and social development, plans for national economic and social development, and budgets of their administrative regions and reports on the implementation of such outlines, plans and budgets, to examine and supervise government debts, and to supervise the management of state-owned assets by the people's governments at their corresponding levels. [...]

And Article 12 prescribes that:

The People's congresses of townships, ethnic townships, and towns shall exercise the following powers and functions: [...]

(3) decide, in accordance with national plans, on development plans and projects for the economy, cultural affairs and public services within their respective administrative regions; [...]

(4) examine and approve budgets and reports on their implementation within their respective administrative areas, supervise the implementation of budgets at their corresponding levels, examine and approve plans for adjusting budgets at their corresponding levels, and examine and approve final accounts at their corresponding levels; [...]

(5) decide on the plans for civil affairs within their respective administrative areas [...].

Article 50 stipulates further:

The standing committee of a local people's congress at or above the county level shall exercise the following powers and functions: [...]

(5) upon the recommendation of the people's government at the same level, examine and approve the adjustments to the outlines of the plans for national economic and social development, plans for national economic and social development, and budgets of its administrative area; [...]

(6) supervise the implementation of the outlines of the plans for national economic and social development, plans for national economic and social development, and budgets of its administrative area, examine and approve the final accounts at its level, supervise the rectification of the problems identified through auditing, and examine and supervise government debt; [...].

According to Article 73:

A local People's government at or above the county level shall exercise the following powers and functions: [...]

(5) prepare and implement the outline of the plan for national economic and social development, the plan for national economic and social development, and the budget, administer the economy, education, science, culture, public health, sports, urban and rural construction, etc., and conduct administrative work concerning ecological environment protection, natural resources, finance, civil affairs, social security, public security, ethnic affairs, judicial administration, population and family planning within its administrative area; [...].

Article 76 further outlines:

The People's government of a township, ethnic township, or town shall exercise the following powers and functions: [...]

(2) implement the outline of the plan for national economic and social development and the budget of its administrative area and conduct administrative work concerning economy, education, science, culture, public health, sports, ecological environment protection, finance, civil affairs, social security, public security, judicial administration, population and family planning within its administrative area; [...].

These legislative requirements for all levels of administration to implement the respective FYPs fully correspond to the wording of the plans themselves which presumes that the plans will be observed. For instance, the final chapter of the 14th FYP sets out the modalities for its implementation and calls on all recipient entities to ensure its successful application[334]:

We shall strengthen organization, coordination, and supervision of the implementation of this plan and establish and improve planning and implementation monitoring and evaluation, policy assurance, and assessment and supervision mechanisms.

And further[335]:

All regions and departments shall divide work according to their responsibilities and formulate implementation plans to achieve the main goals and tasks herein. This plan sets out binding indicators, major engineering projects, and tasks in public services, environmental protection, safety assurance, and other fields. It clarifies the responsible parties and schedule requirements, reasonably allocates public resources, guides and controls social resources, and ensures completion as scheduled. This plan proposes expected indicators and tasks in the fields of industrial development and structural adjustment and mainly relies on the role of market players to achieve these tasks. Governments at all levels must create a favorable policy environment, institutional environment, and legal environment. Annual plans shall implement the development goals and key tasks proposed in this plan. The main indicators determined in this plan shall be broken down into

334 See 14th FYP, Chapter 65, Introduction.

335 Ibid, Chapter 65, Section 1.

an annual plan indicator system to set annual goals, strike a comprehensive balance between years, and reasonably determine the focus of annual work.

Similarly to the 14th FYP, sectoral, provincial and/or municipal plans also provide for rigorous implementation by the relevant authorities. For example, the 14th FYP on the Development of Smart Manufacturing[336] addresses the roles of the administration in setting out the modalities to implement the plan[337]:

> *The* [MIIT], *together with relevant departments, shall coordinate the plan's implementation; each relevant department shall, in accordance with the division of responsibilities, adopt concrete and effective policy measures and focus on the implementation of key tasks. All localities shall implement relevant supporting policies taking local realities into account and ensure information feedback. Relevant industry organizations shall be fully involved as bridges and links and jointly promote the effective implementation of the plan.*

In the same vein, the 14th FYP on Developing Raw Material Industry[338] ('*14th Raw Materials FYP*'), contains a section on implementation measures (see Section 12.2.1.1 for more details) requesting diligent implementation not only by the relevant authorities and but also by industry organizations: "[I]*ndustry organizations shall be fully involved as a bridge between enterprises and the government and timely provide feedback as problems arising in the course of the Plan's implementation and their suggestions*"[339].

Regarding implementation of provincial plans, the Guangdong 14th FYP provides an example, insofar as it contains the implementation requirement, recalling also the Party's leadership[340]:

> [Guangdong shall] *adhere to the leadership of the Party, further improve the planning system, innovate and improve the planning implementation mechanism, strengthen planning constraints, strengthen supervision and evaluation, strengthen the supporting role of major carriers, and ensure the effective implementation of the plan.* [...] *Strengthening the overall leadership of the Party and leading economic and social development with development planning is an important way for the Party to govern the country and an important manifestation of the development model of socialism with Chinese characteristics.*

The municipal level plans contain corresponding provisions ensuring strict implementation. For instance, the Chongqing Municipal 14th FYP states that the main goal of the plan is to: "[s]*trengthen the government's target responsibility, the binding indicators and public service areas proposed in this plan*" and further that "[t]*he tasks in the area of public services, is the*

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336 14th FYP on the Development of Smart Manufacturing; available at: https://www.gov.cn/zhengce/zhengceku/2021-12/28/5664996/files/a22270cdb0504e518a7630fa318dbcd8.pdf (accessed on 16 August 2023).

337 Ibid, Chapter V.

338 14th FYP on Developing Raw Material Industry; available at: https://www.gov.cn/zhengce/zhengceku/2021-12/29/5665166/files/90c1c79a00b44c67b59c29392476c862.pdf (accessed on 16 August 2023).

339 Ibid.

340 Guangdong 14th FYP; available at: https://www.gd.gov.cn/zwgk/wjk/qbwj/yf/content/post_3268751.html (accessed on 16 August 2023).

solemn commitment of the government to the people of the city, to be decomposed and implemented to each district, county governments and relevant municipal departments"[341].

In view of the above, it is apparent that the implementation and reference to higher level plans is resolutely addressed across plans at every level, often in the introductory part or the final chapters of the respective FYPs and other planning documents. This cannot be dismissed as simply aspirational language since the implementation of plans is mandated by law, including by the Constitution. In addition, the implementation and fulfilment of targets set by various plans are regularly monitored and evaluated (see Section 4.3.2).

4.3.2. MONITORING AND EVALUATION OF FYPS' IMPLEMENTATION

As mentioned in the previous Section, plans are not simply drawn up, but they are expected (and legally mandated) to be implemented. This is evidenced not only by the level of detail and the setting of targets, but by the systematic review, monitoring and reporting mechanisms that are established and executed for the FYPs at all levels.

The 14th FYP states[342]:

> *We shall carry out dynamic monitoring, mid-term evaluation, and summary evaluation of the implementation of the plan, submit the mid-term evaluation and summary evaluation to the Central Committee Politburo Standing Committee* [...] *for deliberation in accordance with procedures, report to the* [NPC] *Standing Committee on the status of the implementation of the plan, and consciously accept the supervision of the NPC. We shall give full play to the supervisory role of national supervisory agencies and auditing agencies in promoting the implementation of the plan. We shall incorporate the implementation of the plan into the evaluation systems of relevant departments, local leadership groups, and cadres and use it as an important basis for improving government work. When this plan needs to be adjusted, the adjustment plan must be proposed by the State Council and reported to the NPC Standing Committee for approval.*

Monitoring and evaluation mean that targets are set against which progress can be measured. These drive the projects, initiatives, policies, and reform measures specified in the plans while also determining the schedule.

In addition, moving forward in the planning process requires a stocktaking of the achievements to steer the way ahead. As mentioned in Section 4.2.2, FYPs set out targets to be met, that tend to increase in level of detail as the administrative level of the plan issues decreases. Virtually all 14th FYPs contain in their introduction part or in the first chapter a section dedicated to the evaluation of the implementation of the 13th FYPs and drawing appropriate lessons.

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341 See Chongqing 14th FYP, Chapter 55, Section 1; available at: https://www.ndrc.gov.cn/fggz/fzzlgh/dffzgh/202106/P020210617666449412183.pdf (accessed on 16 August 2023).

342 See 14th FYP, Chapter 65, Section 2.

Moreover, authorities at various levels of government are required to report to the people's congresses at the corresponding level[343]. Additionally, on the central level, periodical reports on developments of the FYP, such as the one on the first year of the 14th FYP presented to the NPC by the then Premier Li Keqiang, sets out targets and a work program for the following years[344].

4.3.3. MOTIVATION TO IMPLEMENT FYPS

In addition to the formal mandatory nature of the plans stemming from relevant laws and from the wording of the plans themselves, another component complements the functioning of the planning system in China, namely the motivation – of government officials and enterprises alike – to actually implement the plans.

In the case of cadres, in particular leading cadres, it is important to bear in mind that implementation of the various plans features among the criteria on which their performance is evaluated. Because these evaluations help determine if they will be promoted or possibly demoted, there are strong incentives for them to implement the plans[345].

In the case of industry, such motivation is apparent. Given that the plans lay down the government priorities, the regulatory and financial support will be primarily channelled into such selected priority sectors. The Chinese businesses, state-owned as well as private, have therefore a strong incentive to align their activities with the priorities identified in the relevant plans, as being consistent with the plans is more likely to result in favorable treatment by the government authorities, typically in terms of market access or financial support[346]. Concerning private businesses, the influence which the plans exert on their operation must be further considered also in combination with further developments towards an ever tighter State/Party control over the private sector (see also Section 2.3.2 on government intervention into private businesses or Section 3.3.2 on CCP control over the private sector). In this sense, the planning system represents an additional component through which the authorities exercise control of private business against the background of the ongoing wider ideological debate in China on the role of the private sector in the country's economy[347].

Also, the role of the industry associations in the implementation of plans and industrial policies is a standard feature of FYPs. In addition to the above-mentioned example of the 14th Raw Materials FYP (see Section 4.3.1), the 14th FYP on the Development of Robotics Industry illustrates the role of industry associations in implementing plans and industrial policies: "*Give full play to the role of bridges such as industry associations and intermediary organizations,*

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343 For additional details, see, for example, *Chinese premier delivers government work report*, Xinhua, 5 March 2023; available at: https://english.www.gov.cn/premier/news/202303/05/content_WS6403edf8c6d0a757729e7a15.html (accessed on 16 August 2023).

344 See *Report on the Work of the Government*, 12 March 2022; available at: https://english.www.gov.cn/premier/news/202203/12/content_WS622c96d7c6d09c94e48a68ff.html (accessed on 16 August 2023).

345 See for example at: https://www.gov.cn/jrzg/2013-12/09/content_2545183.htm (accessed on 21 August 2023).

346 Kennedy, S., Johnson, K., *Perfecting China, Inc. The 13th Five-Year Plan*, CSIS, 2016, p. 4.

347 See, for example, Gore, L., *Behind Xi Jinping's Resurrection of Ideological Orthodoxy* in Pieke, F. N., Hofman, B. (editors), *CPC Futures, the New Era of Socialism with Chinese Characteristics*, 2022.

strengthen the dynamic monitoring of the robot industry, give timely feedback on problems in the planning and implementation process and make suggestions"[348]. Additionally, various industry associations also publish their FYPs, such as the 14th FYP on textiles[349] published by the China Textile industry or the 14th FYP on scrap steel[350] issued by the scrap steel association.

At the same time, government officials have also a strong motivation to ensure appropriate plan implementation, since reviewing the effectiveness of plan implementation inevitably contains an element of assessing the performance of the local leaders who are in charge of the plan implementation. As it has been reported, not complying with the targets set by the relevant plans can result in a career advancement veto for the cadres concerned[351].

4.4. CHAPTER SUMMARY

China's multi-layered planning system is an important tool for China's leadership to shape the economic and social development of the country. This holds true despite the fact that their complex structure is sometimes combined with wording open to interpretation (see Section 4.2.1). Far from merely constituting a platform for possible government interventions into the economy, the planning system is more systemic, as the initially broader policy orientations of the higher-level plans (see in particular Section 4.2.2) are gradually fleshed out (see Sections 4.2.2, 4.2.6, 4.2.7, 4.2.8) to the point of translating broader policy goals into specific targets or individual projects receiving government support (see Sections 4.2.6 and 4.2.7). In the 14th planning period, an increasing number of these targets are enshrined in lower level FYPs and ad hoc policy documents (see Section 4.2.1). The set of interventionist tools which the plans envisage to be employed by government bodies ranges from quantitative and qualitative development targets, production targets, capacity control, to financial support, to security of supply or to interventions into the corporate structure of businesses (see Section 4.2) and is mirrored by the pledge to encourage and support the sectors/areas/companies which the plans designate as priorities (see in particular Section 4.2.9).

Plans are more than just strategic visions. Numerous provisions in laws and in the plans themselves attest to their binding nature. They determine the direction of the Chinese economy, set out priorities and prescribe the goals which all levels of government and emanations of the State must focus on and strive to implement. The objectives set by the plans are of a binding nature (see Section 4.3.1) and the higher level authorities regularly control and monitor the progress of their implementation (see Section 4.3.2).

Overall, the structure of the existing planning system, as well as substance of the set of 14th FYPs at the respective levels of administration, suggests that even though the planning documents maintain the stated objective of allowing the markets to play a decisive role in resource allocation (see Sections 4.2), the Chinese leadership continues to rely on a planning mechanism to strongly encourage the direction of resources towards sectors deemed to be

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348 14th FYP on the Development of Robotics Industry, Chapter 4, Section 1.

349 Available at: http://info.texnet.com.cn/detail-857651.html (accessed on 16 August 2023).

350 Available at: http://www.csteelnews.com/xwzx/jrrd/202109/t20210917_55000.html (accessed on 16 August 2023).

351 Melton, O., *China's Five-Year Planning System: Implications for the Reform Agenda,* 2015, p. 5.

strategic or otherwise important, thereby setting the conditions of competition based on public policy objectives and maintaining a decisive impact on the economy.

5. STATE OWNED ENTERPRISES

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5.1. INTRODUCTION

This chapter examines the extent to which the Chinese market is served by enterprises which operate under the ownership, control or policy supervision or guidance of the Chinese authorities. The chapter examines the relevant legal and institutional framework. It pays special attention to how the Chinese authorities control SOEs and use them as important tools to implement the country's industrial policies. In that connection, the chapter also highlights the new and additional tools that the Government has increasingly used in recent years, in particular the Government Guidance Funds. Government Guidance Funds provide the State authorities with additional channels to influence the economy, structurally similar to those of using SOEs.

5.2. SOEs AND THEIR WEIGHT IN THE CHINESE ECONOMY

The Organisation for Economic Co-operation and Development ('*OECD*') has consistently defined an SOE as follows:

> [A]*ny corporate entity recognised by national law as an enterprise, and in which the state exercises ownership, should be considered as an SOE. This includes joint stock companies, limited liability companies and partnerships limited by shares. Moreover statutory corporations, with their legal personality established through specific legislation, should be considered as SOEs if their purpose and activities, or parts of their activities, are of a largely economic nature.*

Furthermore, the following companies are considered SOEs[352]:

> [...] *enterprises* [...] *under the control of the state, either by the state being the ultimate beneficiary owner of the majority of voting shares or otherwise exercising an equivalent degree of control. Examples of an equivalent degree of control would include, for instance, cases where legal stipulations or corporate articles of association ensure continued state control over an enterprise or its board of directors in which it holds a minority stake.*

The definitions used by Chinese legislation and the World Trade Organization (*'WTO'*) Trade Policy Review Body are not dissimilar. The relevant Chinese legislation refers to '*state-invested enterprises*' and defines them as '*a wholly state-owned enterprise or company with the state being the sole investor, or a company in which the state has a stake, whether controlling or non-controlling*'[353]. Official Chinese statistics are based on the categories of '*state-owned enterprises*' and '*state-holding enterprises*'[354]. The WTO Trade Policy Review Body, for its part, uses the term '*state-controlled enterprises*' instead of '*state-holding enterprises*'. Both terms encompass enterprises with more than 50% state ownership, as well as those where the State has less than 50% ownership but more than other shareholders or those where the State owns fewer shares than other shareholders but obtains control through agreement[355]. This latter definition would come closest to the above OECD notion of SOEs as entities in which the State effectively exercises control.

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352 See OECD (2015), *OECD Guidelines on Corporate Governance of State-Owned Enterprises*, 2015 Edition, OECD Publishing, Paris, p. 14, available at: https://doi.org/10.1787/9789264244160-en (accessed on 25 January 2023). It further refers to border line cases which need to be assessed on a case-by-case basis. See also OECD, *Recommendation of the Council on Competitive Neutrality*, OECD/LEGAL/0462, adopted on 31 May 2021, p. 5, 6; available at: https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0462 (accessed on 25 January 2023).

353 Law on the State-Owned Assets of Enterprises, Article 5 (see further section 5.2).

354 See the China Statistical Yearbook (2020), in particular sections 1-7 and 1-8 including the explanatory notes after sections 1-8 and 13-15, available at: http://www.stats.gov.cn/tjsj/ndsj/2020/indexeh.htm (accessed on 26 January 2023). The category 'state-owned enterprise' comprises '*non-corporation economic units where the entire assets are owned by the State and which have been registered in accordance with the Regulation of the People's Republic of China on the Management of Registration of Corporate Enterprises*' whereas the category 'state-holding enterprises' refers to '*the original state-owned enterprises and state-holding enterprises. They are classified according to the actual investment made by the contributors of state-owned part in the paid-in capital of the enterprises, or the degree of control or dominance of the contributor on the assets of the enterprises. The following cases are regarded as state-holding: (1) Absolute state-holding in which the contributors of state-owned parts possess more than 50% of all the paid-in capital (stocks) of the enterprises; (2) Relative state-holding in which the contributors of state-owned parts possess no more than 50% of the paid-in capital (stocks) of the enterprises, but more than that of any other contributors; or agreed state-holding in which the contributors of state-owned parts possess no more than other contributors but have actual control over the enterprises according to agreements; (3) In case both contributors possess 50% and it is not clear which one is in absolute holding position, the enterprise is regarded as state-holding enterprise if one of the contributor has state-owned elements.*' See also OECD Working Group on Privatisation and Corporate Governance of State Owned Assets (2009), *State Owned Enterprises in China: Reviewing the Evidence*, available at: http://www.oecd.org/corporate/ca/corporategovernanceofstate-ownedenterprises/42095493.pdf, p. 5-6 (accessed on 26 January 2023).

355 WTO Trade Policy Review China report - WT/TPR/S/342 (2016), p. 96, available at: https://www.wto.org/english/tratop_e/tpr_e/tp442_e.htm (accessed on 6 January 2021).

The aforementioned definitions cannot be exhaustive in delineating the precise extent of the state-owned and/or state-controlled sector of the economy. Indeed, standard corporate metrics may '*fail to capture key aspects of Chinese corporate governance and industrial organization*'[356] since, in the Chinese economy, control is reportedly sometimes conferred not only via the ownership- or agreement-based channels but can originate from other, more informal arrangements. Such arrangements which have also been described as '*networked hierarchy*'[357] originate typically in a dense network of connections and personal links between individual SOEs managers and political cadres which in turn are an expression of the Party exercising control over the economy.

Given the above limitations with respect to defining SOEs in China, as well as the lack of reliable figures in particular on the sub-central level of government, several of the following figures illustrating the importance of SOEs in the Chinese economy are estimates. They are likely to underestimate the actual extent of government ownership and/or control in China as none of the above-mentioned SOE definitions captures all the complexities of the relevant ownership/control structures. According to the State Council's own statement, there were some 13 000 SOEs by the end of 2019, including 97 central SOEs[358], 990 provincial SOEs, 12 294 SOEs at the county, district, municipal, and prefectural levels, as well as 167 000 subsidiaries at all levels[359]. The statement further indicates that the total assets of Chinese SOEs were worth, as of 2019, RMB 201.3 trillion and that SOEs generated 12.8% of China's 2019 GDP. However, other sources estimate the SOEs' contribution to China's GDP significantly higher, accounting for some 25%[360], possibly even more[361]. As for central SOEs under the supervision of the central SASAC, their registered total assets amounted to RMB 63.4 trillion[362]. The International Monetary Fund ('*IMF*') points out in this respect that as of 2018, total assets of Chinese SOEs

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356 Lin, L. and Milhaupt, C. (2013). *We are the (National) Champions: Understanding the Mechanisms of State Capitalism in China*. Stanford Law Review Vol. 65:697, p. 706 ff.

357 *Ibid.*

358 In October 2022, the SASAC SOE directory listed 96 central SOEs.

359 *Special Report of the State Council on the Management of State Assets of Enterprises under the Supervision of the State Assets Supervision and Administration Commission in 2019* (original text in Chinese), p. 1-2, available at: http://www.npc.gov.cn/npc/c30834/202010/92861cc1660044d0b4c1511083bab902.shtml (accessed on 26 January 2023). See further Lardy, Nicholas: *Xi Jinping's turn away from the market puts Chinese growth at risk*, available at: https://www.ft.com/content/3e37af94-17f8-11e9-b191-175523b59d1d (accessed on 26 January 2023).

360 Estimates for SOEs share in Chinese economy vary from 20% all the way up to 30%. See Grünberg, N. (2021) *Party-state capitalism under Xi: integrating political control and economic efficiency*, available at: https://merics.org/en/party-state-capitalism-under-xi-integrating-political-control-and-economic-efficiency (accessed on 4 February 2023), where the share of SOEs in the Chinese GDP was estimated at 20%-25%. See further WTO Trade Policy Review China report – WT/TPR/S/415 (2021), p. 98, available at: https://www.wto.org/english/tratop_e/tpr_e/s415_e.pdf (acccessed on 4 February 2023), where that share was estimated to be between 23% and 28% in 2017. See also Kennedy, S., Blanchette, J. (2021). *Chinese State Capitalism – Diagnosis and Prognosis*, Center for Strategic and International Studies, p. 9, available at: https://www.csis.org/analysis/chinese-state-capitalism (accessed on 4 February 2023), where the range was estimated at 25% - 30%.

361 See Guluzade, A. (2020), *How reform has made China's state-owned enterprises stronger*, available at: https://www.weforum.org/agenda/2020/05/how-reform-has-made-chinas-state-owned-enterprises-stronger/ (accessed on 4 February 2023).

362 Special Report of the State Council, p. 1.

stood at 194% of GDP, higher than in the early 2000s[363]. Some estimates suggest that the current value of SOEs' assets may be as high as approximately 220% of China's GDP[364]. In addition to the overall extent of government ownership in China, SOEs also tend to be several times larger than private enterprises irrespective of the metrics used. A 2021 IMF paper estimates, referencing available data for listed companies, SOEs to have on average 2.5 times as many workers and a 7 times larger average capital stock than private companies[365].

The number of SOEs under direct supervision of central SASAC (see further in Section 5.2) amounted to 97 in June 2021[366]. According to the 2021 edition of the Fortune Global 500 list, three China-based SOEs feature among the five largest companies in terms of revenue globally – State Grid Corporation of China, China National Petroleum Corporation, and Sinopec Group as numbers two, four, and five, respectively[367]. Moreover, among the 30 Chinese companies featuring in the top one hundred of the Fortune Global 500 list, only six are not state-owned.

In terms of the manufacturing sector only, according to the latest figures published by the IMF, Chinese SOEs account for some 39% of total industrial corporate assets and for approximately the same portion of total corporate debt[368]. At the same time, estimates consistently suggest that SOEs account for only around 18% of China's industrial profit[369]. While the figures on the exact share of SOEs in China's GDP vary slightly over the years and across sources, the relative size of SOEs in the Chinese economy has not changed substantially in the past 25 years[370]. At the

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363 International Monetary Fund (2021), People's Republic of China: *Selected Issues, Country Report No. 2021/012*, p. 9, available at: https://www.imf.org/en/Publications/CR/Issues/2021/01/13/Peoples-Republic-of-China-Selected-Issues-50007 (accessed on 4 February 2023).

364 Rosen, D., Hanemann, T., Lietzow, R., Featherston, R., Lipsky, J., Graham N. (2021), *China Pathfinder: Annual Scorecard*, p. 31, available at: https://www.atlanticcouncil.org/wp-content/uploads/2021/10/China-Pathfinder-Annual-Scorecard-2021.pdf (accessed on 4 February 2023).

365 International Monetary Fund (2021) - Jurzyk, E.M., Ruane, C., *Resource Misallocation Among Listed Firms in China: The Evolving Role of State-Owned Enterprises*, p. 8-9, available at: https://www.imf.org/en/Publications/WP/Issues/2021/03/12/Resource-Misallocation-Among-Listed-Firms-in-China-The-Evolving-Role-of-State-Owned-50167 (accessed on 4 February 2023).

366 See the full list on the SASAC, available at: http://www.sasac.gov.cn/n2588035/n2641579/n2641645/index.html (accessed on 4 February 2023).

367 See Fortune Global 500, available at: https://fortune.com/global500/search/?fg500_country=China (accessed on 4 February 2023). There are altogether 135 China based companies on the Fortune Global 500 list, the vast majority of them being SOEs, as confirmed by SASAC, available at: http://en.sasac.gov.cn/2021/08/03/c_7528.htm (accessed on 1 December 2021). To give just a few examples, the China State Construction Engineering Corp. features on position 13, the Chinese state-owned banks – ICBC, CCB, ABC and BOC occupy positions 20, 25, 29 and 39, respectively and China Railway Engineering Group coming in at number 35. All of the aforementioned companies have improved their ranking in the 2021 Fortune Global 500 list compared with the previous year.

368 International Monetary Fund (2021), *IMF Country Report No. 2021/006: 2020 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the People's Republic of China*, p. 62., available at: https://www.imf.org/en/Publications/CR/Issues/2021/01/06/Peoples-Republic-of-China-2020-Article-IV-Consultation-Press-Release-Staff-Report-and-49992 (accessed on 4 February 2023).

369 Rosen, D.H., Leutert, W., Shan, G.,(2018). *Missing Link: Corporate Governance in China's State Sector, An Asia Society Special Report with Rhodium Group*. p. 9, available at: https://rhg.com/research/missing-link-corporate-governance-in-chinas-state-sector/ (accessed on 4 February 2023).

370 Kennedy, S., Blanchette, J. (2021). *Chinese State Capitalism - Diagnosis and Prognosis*, Center for Strategic and International Studies, p. 9. See also Grünberg, N. (2021). *Party-State Capitalism under Xi: aligning the economy with political objectives,* in: The CCP's Next Century - Expanding economic control,

same time, while SOEs are present in most sectors of the Chinese economy, they are dominant in energy, transportation, public utilities and other strategic sectors[371], and the State Council itself also acknowledged the domination of SOEs in the following strategic sectors[372]:

> *SOEs have provided nearly 100% of crude oil and on-grid energy, and 97.4% of natural gas across the country, built a nationwide basic telecommunications network, and played an important role in the construction and operation of major infrastructures and livelihood projects.*

Besides the effective control of those strategic sectors, the Chinese authorities put an emphasis on SOEs boosting their presence in sectors of the modern services and technologies. As stated by SASAC in late 2019 "[t]*he focus will be on ramping up technological innovation by* [SOEs]*, and making the most of SOEs to encourage innovation and develop the advanced manufacturing sector*"[373]. It should be noted that the concepts of '*technological innovation*' or '*advanced manufacturing*' are cross-sectoral in nature. In other words, SOEs keep playing an important role in such sectors as steel (see Chapter 14), aluminium (see Chapter 15) or chemicals (see Chapter 16).

Even though SOEs at the sub-central level account for the majority of entities, assets and employees, the centrally controlled SOEs are best positioned and have the task to represent China and deliver on industrial policy objectives[374], as aptly summarized by the State Council itself[375]:

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digital governance and national security, no. 10, MERICS, p. 24, available at: https://merics.org/sites/default/files/2021-07/MERICSPapersOnChinaCCP100_3_1.pdf (accessed on 4 February 2023).

371 Ibidem. See further: *OECD Economic Surveys: China 2019*, p. 47-48, available at: https://www.oecd-ilibrary.org/economics/oecd-economic-surveys-china_20725027 (accessed on 4 February 2023). See also *China Pathfinder: Annual Scorecard*, October 2021, p. 30.

372 *Special Report of the State Council*, p. 2. Defence, electricity generation and distribution, petroleum and petrochemicals, telecommunications, coal, civil aviation and waterway transport were designated as strategic sectors in 2006. See: e.g. Huanxin, Z. (2006), *China names key industries for absolute state control*, available at: http://www.chinadaily.com.cn/china/2006-12/19/content_762056.htm (accessed on 6 February 2023). The assessment whether or not an industrial sector should be classified as being of strategic importance evolves over time and appears to vary also depending on the political context (see e.g. the 2017 designation as Strategic Emerging Industries of the following sectors: next-generation IT, high-end equipment manufacturing, new materials, biotechnology, new-energy vehicles, new energy, energy efficient and environmental technologies, digital innovation, related services). See more details in Ban, V., *China Names Latest "Strategic Emerging Industries"* (2017), available at: https://www.globalpolicywatch.com/2017/03/china-names-latest-strategic-emerging-industries/ (accessed on 6 February 2023). See also *Guiding Opinions on Expanding Investment in Strategic Emerging Industries and Cultivating Strengthened New Growth Points and Growth Poles*, NDRC High Technology (2020) Document No. 1409, English translation, available at: https://www.newamerica.org/cybersecurity-initiative/digichina/blog/new-chinese-ambitions-strategic-emerging-industries-translated/ (accessed on 6 February 2023) - this policy document issued by several PRC ministries in September 2020 lists those same industries as key sectors.

373 See *China's SOEs set for year of innovation reform in 2020, SASAC says* (2019), available at: https://www.scmp.com/economy/china-economy/article/3043580/2020-be-year-innovation-reform-chinas-state-firms-sasac-says (accessed on 13 February 2023).

374 See Batson, A., (2017). *The State of the State Sector*. Gavekal Dragonomics. p. 9, available at: https://www.cebc.org.br/sites/default/files/the_state_of_the_state_sector.pdf (accessed on 1 March 2022).

375 *Special Report of the State Council*, p. 1-2.

A large number of backbone enterprises with core competitiveness emerged one after another, making important contributions to promoting economic and social development, safeguarding and improving people's livelihoods, and enhancing comprehensive national strength.

The presence of SOEs is not limited to sectors that the Chinese government considers strategic. Indeed, strong SOE presence or even dominance covers also sectors such as construction, wholesale and retail, transport and storage or even hotel and catering[376]. Moreover, SOEs' presence is particularly high in the financial sector with state-owned financial institutions holding 88% of the total assets of the sector at the end of 2017[377], while IMF estimates that Chinese state-owned banks held around 60% of the banking system assets in 2016[378]. At the same time, the number of China's official big state-owned banks rose to six in January 2019, four of which are designated as global systemically important banks by the Financial Stability Board[379], referring to their size and global (and thus also national) importance (see also Chapter 6).

The substantial role which SOEs maintain in the Chinese economy as described above[380] gives the Government an exceptionally favourable platform to exert control over the country's economy. Despite numerous announcements by the Government at various points in time that pro-market SOE reforms would be imminent, the recent developments in the relevant institutional and legal framework confirm rather the opposite tendency, namely to use SOEs to pursue other goals, such as supporting the Government's industrial strategies, instead of aligning the SOEs' conduct with market principles. As pointed out by the IMF in 2021, reform progress on SOEs and competitive neutrality has been lagging, contributing to lower productivity and growth. The IMF also notes in this connection that the COVID-19 pandemic exacerbated existing structural problems by prolonging the economic life of non-viable and low-productivity firms, including SOEs[381]. Considering the significant share of SOEs in the

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376 According to a 2019 World Bank Paper, in the construction sector the sales revenues by SOEs in China were to be estimated at some 38% of the sector's sales revenues, with corresponding figures for wholesale and retail amounting to 36%, transport, storage and post 77%, hotel and catering 9%. See: Chunlin, Z., *How Much Do State-Owned Enterprises Contribute to China's GDP and Employment?* (2019), p. 4-6; available at: https://openknowledge.worldbank.org/bitstream/handle/10986/32306/How-Much-Do-State-Owned-Enterprises-Contribute-to-China-s-GDP-and-Employment.pdf?sequence=1&isAllowed=y (accessed on 6 February 2023).

377 *Ibid.*

378 Chapter 3 - *State-Owned Enterprises: the Other Government*. In *Fiscal Monitor, April 2020*, International Monetary Fund; available at: https://www.elibrary.imf.org/view/books/089/28929-9781513537511-en/ch03.xml (accessed on 3 January 2022).

379 WTO Trade Policy Review China Report - WT/TPR/S/415 (2021), p. 156.

380 See World Bank and the Development Research Center of the State Council, P. R. China., (2013), *China 2030: Building a Modern, Harmonious, and Creative Society*, Washington, DC: World Bank, p. 26, available at: http://documents.worldbank.org/curated/en/781101468239669951/pdf/762990PUB0china0Box374372B00PUBLIC0.pdf (accessed on 6 February 2023). This report concedes that '*government ownership is widespread and varied, covering most sectors and ranging from outright ownership to controlling interest to minority shareholder*' (p. 26).

381 IMF Country Report No. 2021/006, p. 5, 9, available at: https://www.imf.org/en/Publications/CR/Issues/2021/01/06/Peoples-Republic-of-China-2020-Article-IV-Consultation-Press-Release-Staff-Report-and-49992 (accessed on 6 February 2023).

Chinese economy, it is not surprising that SOEs produced only one fifth of total industrial output and accounted for almost three-fifths of total losses of industrial enterprises in 2016[382]. IMF economists estimate that SOEs are on average 30% less productive than their counterparts in the private sector, primarily due to inefficient investments[383]. In addition, the SOE sector is characterised by high levels of corporate leverage, as discussed in more detail in Section 11.2.1). This gives some indication of the costs China incurs as it sacrifices potential economic growth in exchange for political control over the economy. At the same time, the Commission's own research based on statistical data up to 2021[384] suggests a certain convergence of SOEs' and privately owned companies' economic performance, in particular when considering profitability as a function of revenue[385]. This convergence tendency varies significantly in individual sectors, however, observed across the Chinese economy overall, the trend appears to hold true, even if private enterprises keep outperforming SOEs in terms of revenue and profit in absolute terms, as well as growth rates (see Figure 5.1 and Figure 5.2).

Figure 5.5.1: Assets, revenue and profit of SOEs

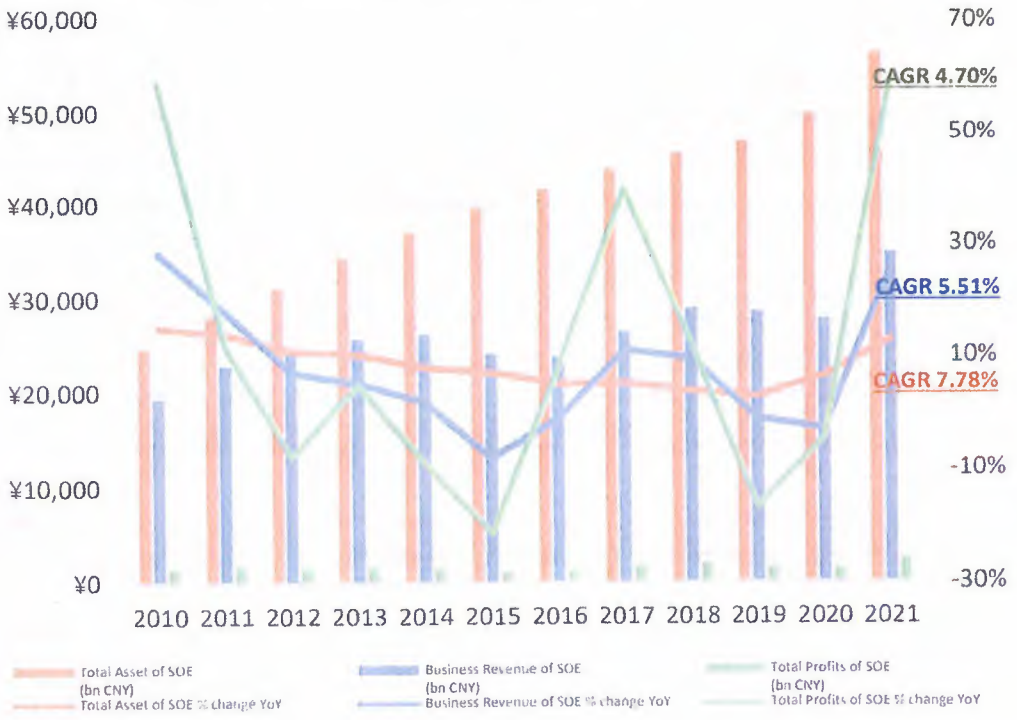


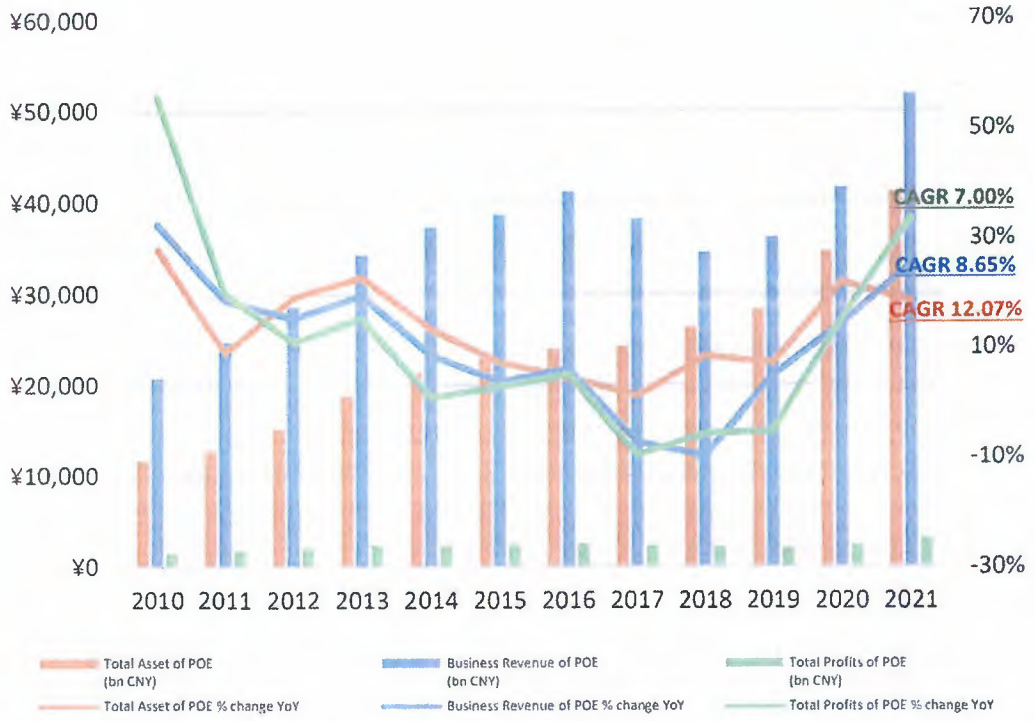
Figure 5.5.2 Assets, revenue and profit of privately owned enterprises

382 European Union Chamber of Commerce in China (2021), *European Business in China Position Paper 2021/2022*, p. 22, available at: https://www.europeanchamber.com.cn/en/publications-archive/964/European_Business_in_China_Position_Paper_2021_2022 (accessed on 6 February 2023).

383 Ip, G., (2021, September 22)), *Evergrande's Struggles Reflect China's Efforts to Rein in Multiyear Debt Boom*, The Wall Street Journal, available at: https://www.wsj.com/articles/evergrandes-struggles-reflect-chinas-efforts-to-rein-in-multiyear-debt-boom-11632319200?st=s3orjaijmusmz9h&reflink=desktopwebshare_permalink (accessed on 6 February 2023).

384 China Statistical Yearbook by the National Bureau of Statistics, available at: http://www.stats.gov.cn/tjsj/ndsj/ (accessed on 6 February 2023).

385 The convergence trend is less apparent when profitability is assessed as a function of assets held.



In addition to SOEs in the traditional sense, attention also needs to be paid to a special form of government-dominated legal entities that have been gaining considerable prominence since approximately 2014, namely the so called GGFs (see for more details Chapter 6). GGFs complement and sometimes overlap with the role of SOEs. Their purpose is to raise money from public and private sources and to make investments consistent with government priorities. GGFs have a mixed record in achieving the proclaimed goals - in particular leveraging private capital – and they display signs of redundancy, inefficiency and poor management[386]. However, already in view of the sheer size of the government agencies' contributions to the GGFs, they represent an important tool to channel support to strategic industries or other priority projects chosen by the government authorities[387]. For example, as the government pushed for more innovation in '*core technologies*', the volume of investments made by GGFs into the semiconductor sector increased by more than 800% (by USD 7.4 billion in absolute terms) between 2018 and 2020[388]. Consequently, similarly to the role played by SOEs (see Section 5.3 below), GGFs strengthen the government control over resource allocation, sometimes as a

386 *Ibid.*, p. 14-17; Noble, L., Deep China, p. 6-7.

387 See Sun, Y., *China Technology Funds Battle to Hit Profit Targets*, available at: https://www.ft.com/content/5f6d7ffb-575e-4532-9a4b-1658317d84a2 (accessed on 1 March 2022).

388 During the same period, the number of registered companies in the sector increased by 52%. Arteburn, J. (2021). *Party Capital - a Blueprint for National Security Due Diligence on China*. C4ADS. p. 12. and fn. 36, available at: https://static1.squarespace.com/static/566ef8b4d8af107232d5358a/t/6143354ace0d611bdf38f459/1631794523711/Party+Capital+Report.pdf (accessed on 3 December 2021).

direct extension of the SOE policies, for instance when SOEs themselves participate in and/or manage the GGFs[389] or when GGFs invest in SOEs[390].

The sections below examines in more detail the legal and institutional framework in which Chinese SOEs operate and how the Chinese government uses within that framework SOEs as a tool pursuing the government's industrial policy agenda.

5.3. Role of SOEs in the Chinese Economy – Basic Legal and Institutional Framework

The general legal framework in which SOEs operate is set by Article 7 of the Constitution which stipulates that: "*the State-owned economy, namely, the socialist economy under ownership by the whole people, is the leading force in the national economy. The State ensures the consolidation and growth of the State-owned economy.*" The Constitution therefore ascribes a particular role to the state-owned sector, i.e. to be the leading force of the economy as opposed to e.g. the principle of ownership neutrality in the EU Treaties (see also Chapter 2).

These basic constitutional principles are reiterated and elaborated on by the relevant secondary legislation[391], in particular by the Company Law[392] and the Law on the State-Owned Assets of Enterprises ('*SOE Law*')[393]. According to Article 1 of the Company Law, one of the central objectives of the legislation is to "*maintain the social and economic order and promote the development of the socialist market economy*". Article 1 of the SOE Law develops this principle further. It stipulates that the main purpose of the law consists of "*safeguarding the basic economic system of China, consolidating and developing the state-owned economy, strengthening the protection of state-owned assets, giving play to the leading role of the state-owned economy in the national economy, and promoting the development of the socialist market economy.*" The authorities primarily responsible for implementing this are the national and local

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389 See, for example, "the China Structural Reform Fund being managed by the state-owned China Chengtong Holdings Group Ltd. The structural adjustment fund has become an important driving force for the reform of state-owned enterprises" (original text in Chinese), available at: http://www.sasac.gov.cn/n2588025/n2588139/c7895224/content.html (accessed on 6 February 2023) or "The shareholding of the China Central Enterprises' Innovation and Investment Guidance Fund consisting almost entirely of state-owned enterprises", available at: http://www.sasac.gov.cn/n4470048/n4470081/n4470083/n4470087/c4539619/content.html (accessed on 8 June 2021).

390 Luong, N., Arnold, Z., Murphy, B., *Understanding Chinese Government Guidance Funds*, p. 22; Noble, L., *Deep China*, p. 6, 10, 14.

391 According to Article 16 of the Constitution, available at: http://en.npc.gov.cn.cdurl.cn/constitution.html (accessed on 6 February 2023), '*State-owned enterprises have decision-making power with regard to their operation within the limits prescribed by law.*'

392 Company Law of the PRC, revised for the fourth time on 26 October 2018 in accordance with the Decision of the 6th Session of the Standing Committee of the 13th National People's Congress of the PRC on Amending the Company Law of the PRC, promulgated on 26 October 2018, available at: https://www.bizchinalaw.com/archives/33734 (accessed on 6 February 2023).

393 Law of the PRC on the State-Owned Assets of Enterprises (Adopted at the 5th session of the Standing Committee of the 11th National People's Congress of the PRC on 28 October 2008 and promulgated on the same date), available at: http://www.lawinfochina.com/display.aspx?lib=law&id=7195&CGid (accessed on 6 February 2023).

SASACs that "*shall perform the contributor's functions for state-invested enterprises on behalf of and upon the authorization of the corresponding people's government*"[394].

The idea of consolidation and strengthening of the state-owned sector is emphasized even more in Article 7 of the SOE Law that mandates the State to:

> [...] *take measures to promote the centralisation of state-owned capital to the important industries and key fields that have bearings on the national economic lifeline and state security, optimize the layout and structure of the state-owned economy, promote the reform and development of state-owned enterprises, improve the overall quality of the state-owned economy, and strengthen the control force and influence of the state-owned economy.*

This clarification of the top-down relation of the State to the state-owned sectors is mirrored by Article 36 of the SOE Law that stipulates that "*a state-invested enterprise*[395] *making investment shall comply with the national industrial policies* [...]". The mechanisms through which the State exerts control over SOEs are analysed in more detail in Section 5.4 below.

The current setup formally entered into force in 2003 by means of a Decree of the State Council that promulgated the Interim Regulations on Supervision and Management of State-owned Assets of Enterprises, adopted at the Eighth Executive Meeting of the State Council on 13 May 2003 ('*SASAC Regulation*')[396]. The overall objective of the SASAC Regulation, as provided for in its Article 1, is wider than just preserving the interest of the State as an investor. Article 1 specifies that the SASAC Regulation serves the main purpose to "*establish a State-owned assets supervision and management system that suits the needs of socialist market economy, better run State-owned enterprises, push forward the strategic adjustment to the layout and structure of the State economy*[397]*, develop and expand the State economy* [...]". Articles 5, 6 and 12 mirror the two-layer (central and provincial) system of state-owned asset supervision and administration authorities, namely SASAC and local SASACs, that is also provided for in Article 11 of the SOE Law.

Furthermore, additional provisions of the SASAC Regulation confirm that the mission of the SASACs is to pursue industrial policy and other public policy objectives[398]. Main SASAC obligations, laid down in Article 14, include the obligation of SASAC to shape the economic/competitive structure of selected sectors, which does not necessarily sit well with Article 7, which provides for a separation of government functions of social and public

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394 Article 11 of the SOE Law.

395 As explained above in Section 5.2, the term 'state-invested enterprise' refers to a wholly state-owned enterprise or company with the State being the sole investor, or a company in which the State has a stake, whether controlling or non-controlling – see Article 5 of the SOE Law.

396 Decree of the State Council of the PRC No. 378 of 27 May 2003 (last amended 2019), available at: http://en.pkulaw.cn/display.aspx?cgid=02b98fb0efda657abdfb&lib=law (accessed on 6 February 2023).

397 Article 2 of the SASAC Regulation limits its applicability to the supervision and management of State-owned assets of State-owned enterprises, State-owned holding enterprises and enterprises with State-owned equity. Concerning the supervision and management of State-owned assets of financial institutions - which are outside the scope of the SASAC Regulation – see Chapter 6.

398 Mattlin, M. (2007). *The Chinese government's new approach to ownership and financial control of strategic state-owned enterprises*. Helsinki: *Bank of Finland, Institute for Economies in Transition*, p. 10. See also Article 31 of the SASAC Regulation.

administration from the functions of investor on all levels of administration authorities. Article 14 specifies that one of SASAC's tasks is to "*maintain and improve the controlling power and competitive power of the State economy in areas which have a vital bearing on the lifeline of the national economy and State security, and improve the overall quality of the State economy.*" The remainder of the responsibilities and obligations assigned to SASAC, including the responsibility to "*undertake other tasks assigned thereto by the government at the corresponding level*"[399], ideally position SASAC to abide by and pursue a wide range of government policies via SOEs. SASAC has thus been actively participating in – and sometimes setting (see below in Section 5.4) - the recent SOE reform agenda. Against this backdrop, the stipulation in Article 7 looks like an outlier.

In 2017, the State Council further specified the role of SASAC in the Notice on Forwarding the Plan of the State-owned Assets Supervision and Administration Commission of the State Council on Promoting the Transformation of Functions by Primarily Focusing on Capital Management ('*SASAC Notice*')[400]. The SASAC Notice calls for improving the regulation of planning and investment and states in this connection that[401]:

> [i]*t is essential to follow national strategies and major decision-making, enforce national industrial policies and the overall requirements on the development of key industries, adjust and optimize the layout of State-owned capital, step up efforts of planning and guidance with regard to investment by central enterprises* […].

With regard to the operation of state-owned capital, the SASAC Notice provides that it is vital to "*promote the optimal allocation of State-owned capital by centering around the missions of serving national strategic objectives*" and to "*encourage SOEs to pursue long-term benefits, and push State-owned capital to gravitate towards important sectors and key fields concerning national security, national economic lifeline and people's livelihood, key infrastructure, forward-looking strategic industries and enterprises with core competitive edges*"[402].

In addition, some SOEs, notably in the sectors of financial services and postal services, are subject not only to the supervision by SASAC, but also by other institutions[403] such as the MOF[404].

The laws described above set up a system in which the SOEs, rather than acting according to commercial considerations, have essentially to implement national industrial policies. This typically translates into more specific goals and actions, such as acquiring foreign assets as part

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399 Article 13(6) of the SASAC Regulation.

400 Notice on Forwarding the Plan of the State-owned Assets Supervision and Administration Commission of the State Council on Promoting the Transformation of Functions by Primarily Focusing on Capital Management, General Office of the State Council, Guo Ban Fa [2017] No. 38, promulgated on 27 April 2017.

401 SASAC Notice, Point 2(1).

402 *Ibid.*

403 For an overview of various bodies involved in governing SOEs, see also Rosen, D.H., Leutert, W., Shan, G. (2018), p. 14.

404 OECD (2017), *OECD Economic Surveys: China 2017.* OECD Publishing, Paris, p. 85, available at: https://www.oecd-ilibrary.org/docserver/eco_surveys-chn-2017-en.pdf?expires=1637854393&id=id&accname=oid031827&checksum=FF4E290ADBE7AC2A6E4B8A6B8004FE75 (accessed on 6 February 2023).

of the going global strategy or cooperation with privately-owned companies in order to create 'national teams' of industrial champions[405]. Indeed, collaboration between SOEs and private companies to implement industrial plans and other government policies is an important dynamic that extends the influence of the state-owned economy.

5.4. Role of SOEs in the Chinese Economy – Translating Legal Framework into Industrial Policies

The role which SOEs are supposed to play in the Chinese economy and, more widely, in society has been the subject of decades-long discussions. They centred essentially around the question of how much SOEs should adhere to market principles in their activities and to what extent they should continue performing other roles, such as social tasks attributed to them in the past, including for instance housing, childcare or education of their employees. The 3rd Plenum Decision (see Section 2.2.4) adopted on 12 November 2013 was a major milestone in these discussions about SOE reform. It set the overall reform agenda as follows: "*perfect and develop the socialist system with Chinese characteristics, and to modernize the system and ability to govern the country. We must pay more attention to the systemic, integrated, and coordinated nature of reform*". At the same time, the government's main role should be "*to maintain macro-economic stability, strengthen and optimize public services, guarantee fair competition, strengthen market's regulatory control, safeguard market order, promote a sustainable development, promote common prosperity, and make up for market malfunctions.*"

In addition, section 2 of the 3rd Plenum Decision titled '*Uphold and Perfect the Basic Economic System*' showed a clear preference for the State directed economic model by proclaiming that:

> *the basic economic system of keeping public ownership as the mainstay of the economy and allowing diverse forms of ownership to develop side by side is an important pillar of socialist system with Chinese characteristics, as well as the foundation of socialist market economic structure.* [...] *We must steadfastly consolidate and develop the public sector of the economy, uphold the public sector as the key player, develop state-owned economy's dominant role, and constantly enhance state-owned economy's vigour, control, and influence.*

Moreover, the 3rd Plenum Decision declared that:

> *state-owned capital investment and operation should serve the state strategic goals, and should be geared more to the important industries and crucial sectors vital to state security and the lifeline of national economy, primarily providing public services, developing the important forward-looking strategic industries, protecting the ecological environment, supporting scientific and technological progress, and protecting state security.*

Therefore, despite references "*to properly handl*[ing] *the relationship between the government and the market*" the thrust of the 3rd Plenum Decision was geared towards emphasizing the need

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405 See for example: https://m.thepaper.cn/baijiahao_11648359 (accessed on 8 June 2021) or Grünberg, N. (2021) which describes the current system in China as "*a hybrid economy that blends market capitalism with macro-economic development plans based on objectives outlined by the center, and private and public economic actors working with or alongside each other in various constellations*".

to develop the dominant role of the state-owned economy with powerful SOEs where the State is heavily involved in the operational decisions. This thrust became even more apparent at the implementation stage when the SOE reform agenda outlined by the 3rd Plenum Decision was broken down into a number of initiatives[406] distributed among various authorities[407]. The Guiding Opinions of the CPC Central Committee and the State Council on Deepening the Reform of State-owned Enterprises ('*Guiding Opinions*')[408] are particularly relevant in this implementation context. They first recalled that "*the direction of socialist market economic reform shall be adhered to*" and that it was "*important to follow the rules and laws of market economy and enterprise development, make unwavering efforts to separate government from business, government from capital, and ownership from the right to business operations*"[409]. They also distinguished between two types of SOEs: those engaged in activities of a public welfare nature and commercial SOEs[410]. However, the aforementioned principles do not sit well with major parts of the text. Indeed, it transpired that the Guiding Opinions sought to reinforce the role of state ownership and to use such ownership for strategic economic goals decoupled from market rules[411]. According to Point 2(5) of the Guiding Opinions:

> *Commercial SOEs whose core business belongs to major industries and key fields concerning national security or national economic lifeline, or that are mainly responsible for major special project tasks shall maintain the position of State-owned capital as the controlling shareholder* [...]. *Special business segments shall be effectively separated from competitive business segments, and be independently run and accounted for. The assessment of such SOEs shall not only cover their business performance indicators and the preservation and appreciation of the value of their State-owned assets, but also focus on aspects such as their efforts to serve national strategies, safeguard national security and the operation of the national economy, develop cutting-edge strategic industries and complete special tasks.*

In the same vein, Point 4(14) of the Guiding Opinions stipulates that:

> *it is paramount to* [...] *optimize the key investment directions and fields for State-owned capital by closely centering around the missions of serving national*

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406 The entire 3rd Plenum Decision reforms entailed more than 300 initiatives of which 34 related to SOEs. SOE reforms were also announced in virtually all provinces. See Naughton, B. (2016), *State Enterprise Reform: Missing In Action*, China Economic Quarterly June 2016, Gavekal Dragonomics, p. 19. See further Mizuho Securities Asia Ltd. (2015). *Mizuho Economic Research report of 29 May 2015*, p. 4.

407 SASAC, Ministry of Finance, NDRC etc.

408 Guiding Opinions of the CPC Central Committee and the State Council on Deepening the Reform of State-owned Enterprises, Zhong Fa (2015) No.22, Adopted on 24 August 2015, available at: http://www.lawinfochina.com/display.aspx?id=26805&lib=law&EncodingName=big5 (accessed on 6 February 2023).

409 See Guiding Opinions, point 1(2).

410 *Ibid.*, points 2(4)-2(6).

411 See in that respect also the 2006 Notice of the General Office of the State Council on Forwarding the Guiding Opinions of the SASAC about Promoting the Adjustment of State-owned Capital and the Reorganisation of State-owned Enterprises (Guo Ban Fa [2006] No. 97, 5 December 2006) which declared among its main objectives the goal to "*further promote state-owned capital to concentrate on major industries and key fields relating to national security and national economic lifelines (hereinafter referred to major industries and key fields), and accelerate the formation of a batch of predominant enterprises with independent intellectual property rights, famous brands and strong international competitiveness*".

strategies[412]*, and enforcing State industrial policies and the general requirements of adjusting the layout of key industries, and push State-owned capital to gravitate towards important sectors and key fields concerning national security, national economic lifeline and people's livelihood, key infrastructure, forward-looking strategic industries and enterprises with core competitive edges.*

Moreover, the Guiding Opinions left no doubt about the strong role to be attributed to the CCP in the operation of SOEs. Point 7(24) stipulates that:

It is critical to unify the efforts to strengthen Party leadership with those to improve corporate governance, include the overall requirements on Party building into the articles of association of SOEs, [...]*, allow members of a SOE's Party organization leadership* [...] *to be included in the board of directors, the board of supervisors or the management through statutory procedures, and allow members of a SOE's board of directors, board of supervisors and management who are Party members* [...] *to be included in the SOE's Party organization leadership. In principle, a SOE shall set the position of the chairman of the board of directors separately from the position of the general manager, and its Party secretary and chairman of the board of directors shall generally be served by the same person.*

The pursuit of non-market goals becomes even more apparent from a second set of Guiding Opinions, titled Guiding Opinions on the Functional Definition and Classification of State-owned Enterprises (*'Classification GO'*)[413]. First, the Classification GO confirmed the basic division of SOEs as referred to in the Guiding Opinions, namely the division between SOEs engaged in activities of a public welfare nature and commercial[414] SOEs[415]. Second, the Classification GO also reiterated the subdivision of commercial SOEs into those active in sectors of sufficient competition and those whose core business belongs to major industries and key fields concerning national security or national economic lifeline, or that are mainly responsible for major special project tasks[416]. For those two subgroups of commercial SOEs, the Classification GO envisaged a radically different approach with respect to development, regulation and responsibilities of these two types of commercial SOEs.

On the one hand, SOEs in competitive sectors were to be "*supported and encouraged to develop industries with competitive edges, optimize the investment directions of State-owned capital, promote the transfer of State-owned property rights, promptly dispose of inefficient, ineffective and non-performing assets, and sharpen their market competitiveness*" and they were supposed to "*ensure the business operation autonomy of the management, and actively promote the system of professional managers*". Also, the appraisal of commercial SOEs was supposed to

412 See further Art. 5 of the Measures for the Supervision and Administration of Investment by Central Enterprises (Order [2017] No. 34, issued 7 January 2017), according to which "*the investment of central enterprises shall serve the national development strategy* [...]".

413 Guiding Opinions on the Functional Definition and Classification of State-owned Enterprises, adopted on 29 December 2015 by SASAC, MOF and NDRC.

414 I.e. for-profit.

415 See Classification GO, point 1.

416 See Guiding Opinions, point 2(5) – see also above – and Classification GO, point 2.

"*focus on their operating performance indicators, their preservation and appreciation of the value of State-owned assets and their market competitiveness.*"

By contrast, SOEs in strategic sectors were to "*play an even bigger role in serving national macro-economic control, safeguarding national security and national economic operation, accomplishing special tasks and other aspects*" and SASACs were "*required to* [...] *guide such enterprises to highlight their primary business and better serve major strategies and macro-control policies of the State*". As for appraisal of SOEs in strategic areas, according to the Classification GO:

> *it is imperative to reasonably determine the weight given to operating performance indicators and the indicators of the preservation and appreciation of the value of State-owned assets during their appraisal and strengthen appraisal in such aspects as their efforts to serve national strategies, safeguard national security and national economic operation, develop forward-looking strategic industries and accomplish special tasks.*

The Guiding Opinions of the General Office of the State Council on Promoting the Restructuring and Reorganization of Central Enterprises ('*2016 Guiding Opinions*'), issued in July 2016[417], further complement the language of the Classification GO. The 2016 Guiding Opinions emphasize the importance of the general requirement to "*uphold the dominant position of public ownership, play the leading role of the State-owned economic sector*"[418]. They also list a number of guiding principles, the first one of which is the principle of serving national strategies. Hence, according to the 2016 Guiding Opinions, "*during the restructuring and reorganization of central enterprises, it is imperative to serve national development goals, implement national development strategies, enforce national industrial policies, strengthen the regulation of State-owned assets by focusing on capital management, and constantly promote the optimal allocation of State-owned capital*"[419]. Based on these requirements and principles, the 2016 Guiding Opinions laid down the main objective, according to which by 2020, SOEs should have a more accurate strategic position, more logical general structure, and significantly improved efficiency in capital allocation; a group of innovative and competitive SOEs should have become world-class multinationals[420].

The above shows that despite some language which might seem at first sight to indicate certain '*market oriented*' intentions, the Chinese government had the clear intention to maintain a direct control over the SOEs even in the competitive sectors and to make them play a leading role at home and abroad. The State would provide resources for such developments. The developments

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417 Guiding Opinions of the General Office of the State Council on Promoting the Restructuring and Reorganization of Central Enterprises, Guo Ban Fa [2016] No. 56, promulgated on 17 July 2016. See further *State Council issues guideline on reorganization of SOEs* (2016), available at: http://english.gov.cn/policies/latest_releases/2016/07/26/content_281475402145108.htm and https://www.gov.cn/zhengce/content/2016-07/26/content_5095050.htm (accessed on 6 February 2023), as well as OECD (2017), *OECD Economic Surveys: China 2017*, OECD Publishing, Paris, p. 34.

418 See 2016 Guiding Opinions, point 1(1).

419 *Ibid.*, point 1(2).

420 *Ibid.*, point 2.

in recent years confirm and amplify that the strategic, security-related, social and other objectives prevail over commercial considerations[421].

This is pointedly summarized in the Three-year Action Plan on SOE Reforms 2020-2022 ('*Three-year Plan*'), adopted on 30 June 2020 by the Central Committee for Comprehensive and Deep Reform. While the full text of the Three-year Plan has not been published, its main points, as discussed in the press and explained by the central SASAC in its special report to the NPC in October 2020[422], are the following: (i) to improve modern enterprises system with Chinese characteristics and develop scientific and effective corporate management mechanism; (ii) to push for optimization and restructuring of state-owned asset and focus on the main business of SOEs; (iii) to push forward mixed ownership reform of SOEs; (iv) to stimulate the vitality of SOEs and improve market-oriented operational system; (v) to develop a state-owned asset regulatory system focusing on the management of state capital; (vi) to encourage SOEs to participate in fair market competition; (vii) to implement a series of special actions of SOE reform; (viii) to strengthen the leadership of the CCP in SOEs. This all-encompassing language which ranges from continued commitment to building a system with Chinese characteristics under an even stronger CCP leadership to references to fair competition and market-oriented management must be interpreted in line with the deliberations of President Xi, published in parallel in November 2020[423]:

> *SOEs are an important material and political foundation for socialism with Chinese characteristics, and are an important pillar and force for the Party to govern and rejuvenate the country. They must be stronger, better, and larger. Of course, state-owned enterprises must also be reformed and optimized, but they cannot be denied or weakened.*

Echoing this, Hao Peng, Party Secretary of the CPC Committee and Chairman of SASAC, specified further in his essay published in the CCP journal Qiushi in January 2021 that SOEs are real and political key fundamentals of socialism with Chinese characteristics, key pillars and reliable forces for the CCP to effectively govern and renew the country, as well as key

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421 See, for example, Leutert, W., and Eaton, S. (2021), *Deepening Not Departure: Xi Jinping's Governance of China's State-owned Economy*, The China Quarterly, 248(S1), 200-221. doi: 10.1017/S0305741021000795, p. 200-202. See also Ip, G. (2021), *Evergrande's Struggles Reflect China's Efforts to Rein in Multiyear Debt Boom*, The Wall Street Journal, available at: https://www.wsj.com/articles/evergrandes-struggles-reflect-chinas-efforts-to-rein-in-multiyear-debt-boom-11632319200?st=s3orjaijmusmz9h&reflink=desktopwebshare_permalink (accessed on 6 February 2023).

422 Special Report of the State Council on the Management of State Assets of Enterprises under the Supervision of the State Assets Supervision and Administration Commission in 2019 (original text in Chinese), available at: http://www.npc.gov.cn/npc/c30834/202010/92861cc1660044d0b4c1511083bab902.shtml (accessed on 6 February 2023). For more details about the content of the Three-year Plan, available at: http://www.gov.cn/xinwen/2020zccfh/35/wzsl.html (accessed on 6 February 2023) as well as https://www.chinadaily.com.cn/business/full_coverage/2020soereform (accessed on 16 October 2023).

423 See https://interpret.csis.org/translations/major-issues-concerning-chinas-strategies-for-mid-to-long-term-economic-and-social-development/ (accessed on 4 March 2022).

components of the national governance system under the CCP's leadership[424]. Moreover, he emphasized in the abovementioned special report to the NPC on the SOEs that:

> [...] *the scale and strength increased significantly. By the end of 2019, the total assets and owner's equity of SOEs increased by 1.8 times and 1.6 times, respectively, compared with those at the end of 2012.* [...] *The adjustments on the key fields of pillar industries and the layout of strategic emerging industries were further strengthened. State-owned capital was further concentrated to pillar industries and key fields related to national security, lifelines of the national economy, and people's livelihood, and to forward-looking strategic industries.* [...]. *With the 14th FYP ahead of us, we will follow the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era; strengthen our consciousness of the need to maintain political integrity, think in big-picture terms, follow the leadership core and keep in alignment with the central Party leadership; stay confident in the path, theory, system, and culture of socialism with Chinese characteristics;* [...] *adhere to and strengthen overall Party leadership for SOEs; continue and improve our basic economic system and continue to orient our economic reform towards the socialist market economy* [...]. *We need to increase efforts to improve quality and performance and stabilize growth, and give better play to the supporting role of SOEs in the national economy. We will guide enterprises to overcome difficulties and strive for the annual targets, spare no efforts to achieve sound operations and development, actively expand effective investment, enhance the in-depth collaboration on industry chains and supply chains with private enterprises and SMEs, and proactively prevent and defuse risks of various types, so as to realize the sustained rapid growth of performance of most central SOEs and the positive growth of overall performance of central SOEs and make significant contributions to stabilizing the economy.*

The 14th FYP, passed by the NPC in March 2021 (see Chapter 4), is fully in line with the above with respect to the SOE sector[425]:

> *Centered on the strategy of serving the country, we will persist in both advancing and retreating, both taking action and being inactive, accelerate the layout optimization, structural adjustment, and strategic reorganization of the state-owned sector, enhance the competitiveness, innovation, control, influence, and anti-risk capabilities of the state-owned sector, and strengthen and optimize state-owned capital and SOEs. We will give full play to the strategic supporting role of the state-owned sector, encourage the state-owned sector to further focus on functions such as strategic security, industry leadership, the national economy and the people's livelihoods, and public services, adjust and revitalize inventory assets, optimize the*

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424 See *Thoroughly implement the three-year action for the reform of state-owned enterprises and promote the high-quality development of state-owned assets and state-owned enterprises* (2021), (original text in Chinese), available at: http://www.qstheory.cn/dukan/qs/2021-01/16/c_1126986076.htm (accessed on 8 February 2023).

425 See the 14th FYP, Article XIX, Section 1, available at: https://live-cset-georgetown.pantheonsite.io/publication/china-14th-five-year-plan/ (accessed on 8 February 2023).

allocation of incremental capital, concentrate on important industries that are related to national security and the lifelines of the national economy, concentrate on important industries related to the national economy and the people's livelihoods, such as those involved in the provision of public services, emergency capacity building, and public welfare, and concentrate on forward-looking strategic emerging industries.

Thus, the recent developments provide a confirmation that despite the permanent process of reforming the Chinese SOE sector, a market-oriented transformation of SOEs based on concepts such as competitive neutrality has actually been removed from the agenda of the Chinese authorities. These recent policy documents do not even refer to market-oriented reforms anymore as one of policy goals which should possibly be balanced with other objectives. Instead, any partial adjustments aimed for instance at improving the financial health of SOEs[426] or increasing the participation of private capital in SOEs[427] are embedded in the narrative of strengthening the Party leadership. Under this overarching goal, SOEs remain – and are explicitly referred to as such - part of a wider strategy of creating strong industrial entities which will undertake a national mission of innovation in strategic (technological) areas[428].

In addition, a state-owned sector which represents a sufficiently important portion of the overall economy can be employed by the Chinese authorities not only to advance government industrial policies directly but also for other related tasks on the Chinese government's political agenda. Exercising economic pressure by SOEs on market players which have fallen out of favour with the Chinese government – such as discontinuing business operations with certain foreign banks – represents a typical example of this use of the state-owned sector. Such actions by SOEs which are clearly not based on market considerations but instead follow a political logic are only conceivable in a system with robust government control over SOEs which, at the same time, possess sufficient economic power to economically damage entities allegedly acting in contravention of the political line set by the government[429].

Another example of how SOEs pursue and implement various government goals can be observed in the Xinjiang province. As Party Secretary of the CPC Committee and SASAC Chairman Hao Peng stated: "*during the Thirteenth Five Years Plan period, state-owned central enterprises have continuously increased their counterpart assistance to Xinjiang, industrial cooperation has continued to deepen, and assistance has been continuously increased, making*

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426 See *The General Office of the CPC Central Committee and the General Office of the State Council issued the Guiding Opinions on Strengthening the Asset-Liabilities Constraint of State-Owned Enterprises* (original text in Chinese), available at http://www.gov.cn/zhengce/2018-09/13/content_5321717.htm (accessed on 8 February 2023).

427 For example, promotion of mixed ownership was one of the objectives laid down in the Guiding Opinions. See further the Opinions of the State Council on State-owned Enterprise Developing Mixed Ownership Economy of 23 September 2015, Guo Fa [2015] No. 54, as well as SASAC's Operational Guidelines for Mixed-ownership Reform among Central SOEs of 31 October 2019, Guo Zi Chan Quan [2019] No. 653.

428 Such as Strategic Emerging Industries (see Section 5.2 and footnote 372 above).

429 See: *How Beijing humbled Britain's mighty HSBC* (2021), available at: https://www.reuters.com/article/us-hsbc-china-politics-specialreport-idUSKCN2E410S(accessed on 8 February 2023). See also Grünberg, N., *Party-state capitalism* (referenced in Chapter 2).

positive contributions to Xinjiang's social stability, long-term stability, and economic and social development"[430]. During that period, central SOEs invested in 32 000 projects, 9 322 of which were major infrastructure projects, amounting to RMB 767,05 billion of total investments[431]. Following such recognition, SASAC outlined further tasks expected from central SOEs in relation to Xinjiang. These include promoting industrial assistance to Xinjiang and cultivating and expanding industries with distinctive advantages, stabilizing employment, promoting rural revitalization, strengthening joint ventures ('*JVs*') and cooperation between SOEs and Xinjiang Production and Construction Corps, etc. Several SOEs made pledges in that regard (PetroChina, Sinopec, China Telecom Group, China Guoxin etc.), with Sinopec specifying that it planned to invest RMB 80 to 100 billion in the Xinjiang industry during the 14th FYP period, while China Mobile planned to invest more than RMB 27 billion in free donations, network construction, and low-interest loans during the same period[432].

The Chinese government's use of SOEs during the COVID-19 pandemic is another illustration of China's distortive policies in relation to SOEs. To alleviate financing constraints of SOEs during the pandemic, the central government and regional governments set up rescue funds totalling around RMB 210 billion[433]. After the central SASAC set up a credit guarantee fund of RMB 100 billion in July 2020, local SASACs followed – Hebei, Yunnan, and Henan provinces established their own funds of RMB 30 billion each, while Tianjin set up a RMB 20 billion fund[434]. However, the purpose of the funds was not only to raise the market confidence in SOEs, but also to serve the Government's parallel purpose of advancing its economic goals and public policies by these funds, with their use being steered by local SASACs. As local SASACs were setting up their funds, Central SASAC released a 'Guiding Opinion on Strengthening the Debt Risk Management and Control of Local SOEs'[435]. Point 6 of the opinion emphasizes that: "*all local SASACs should strengthen the management and control of the use of debt financing funds for local state-owned enterprises and urge enterprises to timely and efficiently invest the funds raised in key areas and important industries such as strategic security, industry leadership, national economy and people's livelihood and public services*." Thus, just like the Chinese government continues to consolidate unprofitable SOEs through mergers (see Section 5.5.1), it is feared that credit guarantee funds could further exacerbate the risk of extending the lives of

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430 Liu, L. (2021), *State-owned Assets Supervision and Administration Commission: Increase policy support for Xinjiang* (original text in Chinese), China Securities Journal, available at: https://www.cs.com.cn/xwzx/hg/202109/t20210913_6203592.html?mc_cid=b95f3c429e&mc_eid=523ec61747 (accessed on 8 February 2023).

431 Ibidem.

432 Ibidem.

433 Doi, N. (2021), *China Backs State-owned Enterprises with $32bn in Rescue Funds*, Nikkei Asia, available at: https://asia.nikkei.com/Business/Markets/China-debt-crunch/China-backs-state-owned-enterprises-with-32bn-in-rescue-funds (accessed on 8 February 2023).

434 Wang, L., *State-owned Assets Supervision and Administration Commissions in many places have set up credit stability funds to strive to resolve the debt risks of state-owned enterprises* (original text in Chinese) S&P Global 2021, available at: https://www.spgchinaratings.cn/research/articles/2021-06-28_bulletin_soe-credit-funds_cn_28jun2021_cn (accessed on 6 January 2023).

435 Notice on the issuance of the Guiding Opinion on Strengthening the Debt Risk Management and Control of Local SOEs, State-owned Assets Supervision and Administration Commission (2021) No. 18 (original text in Chinese), available at: http://www.sasac.gov.cn/n2588035/n16549643/n16549900/n16550118/c17761913/content.html (accessed on 8 February 2023).

unprofitable enterprises ('*zombie companies*')[436]. In other words, the text of this Guiding Opinion shows that the rescue funds are not simply meant to extend a lifeline to SOEs in financial distress but come with the additional mandate for SASAC(s) to ensure that the funds are used in areas previously identified by the government as priorities.

All these recent developments and examples illustrate that as the SOE reforms have been morphing and feeding into a variety of government industrial policies over the years - such as various FYPs (see e.g. Chapters 4, 14, 15 and 16), Made in China 2025 (see Section 4.2.3), the supply-side structural reform ('*SSSR*'), the dual circulation (see Chapter 8.2) etc.[437], the overriding government objective for SOEs has been for them to become a crucial factor in the upcoming quest for self-reliance and self-sufficiency. This is confirmed by the explicit references in recent political statements and policy documents to the strategic supporting role of SOEs, to the SOE sector growing bigger, stronger and optimized, as well as the SOE sector following the Party leadership (see Section 5.5 below). The role of the private enterprises is to remain subordinate to the state sector, their development being supported by the Government especially when *"they can participate in the implementation of major national strategies and be encourage*[d] [...] *to actively fulfil their social responsibilities and participate in social welfare and charitable activities"*[438].

5.5. GOVERNMENT CONTROL OVER SOEs

Given the strategic importance the Chinese authorities attach to the state-owned sector, the government has great interest in maintaining effective control over the conduct of SOEs. That control is essentially exercised through two channels: first, the Chinese government reshapes the corporate structure of the sector; and second, it has control over the management and personnel of individual SOEs.

5.5.1. GOVERNMENT CONTROL OVER SOEs' CORPORATE STRUCTURE – FEWER BUT BIGGER SOEs

The government directly shapes the structure of the various sectors in order to achieve its strategic economic goals. Some key sectors are traditionally kept under full state control simply by means of regulatory prohibition for non-state companies to enter. SASAC's 2015 provisional list of SOEs in sectors where absolute state control should be maintained featured the following enterprises: China North Industries Group; China Grain Reserves; China National Petroleum; Sinopec Group; China National Offshore Oil; China Telecom Group; China Mobile Group; and China United Network Communications Group[439].

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436 Xin, Y. (2021), *Many provinces have set up credit stability funds to resolve the debt risks of state-owned enterprises, and the actual effect remains to be seen* (original text in Chinese), Jiemian 2021, available at: https://www.jiemian.com/article/6302879.html?mc_cid=4d676e08e8&mc_eid=523ec61747 (accessed on 8 February 2023).

437 See further Naughton, B., *State Enterprise Reform: Missing In Action*, China Economic Quarterly June 2016, Gavekal Dragonomics, p. 20-21.

438 See the 14th FYP, Article XIX, Section 5.

439 See Mizuho Securities Asia Ltd. (2015), *Mizuho Economic Research report of 5 June 2015*, p. 4.

Moreover, according to the State Council in 2016: "*China will speed up the regrouping of central State-owned enterprises to further reform and develop them*"[440]. As pointed out by a SASAC source, "*to judge the regrouping of central SOEs, one must have a global and national strategic view on whether it will increase the international competitiveness of Chinese enterprises, safeguard the security of national industries and people's livelihoods, and protect the environment for the development of small and medium-sized enterprises.*" In other words, the mergers/consolidation initiative aims to regroup the central SOEs "*to 80 pro-innovation and international-competitive 'national enterprises'*"[441]. Corresponding government regulations have already been in place over a longer period: the 2010 Opinions of the State Council on Promoting Corporate Merger and Restructuring[442] were followed in 2013 by the Guiding Opinions on Accelerating the Promotion of Mergers and Reorganizations of Enterprises in Key Industries ('*Mergers GO*')[443] and in 2014 by the Opinions of the State Council on Further Optimizing the Market Environment for the Merger and Restructuring of Enterprises, all of which promote mergers of SOEs[444].

In line with the abovementioned statements by the State Council and SASAC, the Mergers GO stipulate that[445]:

> *Through promoting enterprises' mergers and reorganisation,* [the aims and tasks are]
> *-to raise the industry concentration level,*
> *-to foster scaling up,*
> *-to intensify operations,*
> *-to raise market competitiveness,*
> *-to foster a number of large enterprise groups that are competitive at international level,*
> *-to foster the industry's structural optimisation and upgrading;(...)*
> *-to speed up the strategic adjustment of the state-owned economy's arrangements and structures,*

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440 *China to further regroup central State-owned enterprises* (2016), available at: http://english.gov.cn/policies/policy_watch/2016/08/23/content_281475423704259.htm (accessed on 8 February 2023). See also European Union Chamber of Commerce in China (2017), *China Manufacturing 2025, putting industrial policy ahead of market forces,* p. 19, available at: http://www.europeanchamber.com.cn/en/publications-archive/473/China_Manufacturing_2025_Putting_Industrial_Policy_Ahead_of_Market_Force (accessed on 10 October 2017).

441 *Ibid.*

442 Opinions of the State Council on Promoting Corporate Merger and Restructuring, Guo Fa [2010] No. 27, issued on 28 August 2010, available at: http://www.lawinfochina.com/Display.aspx?lib=law&Cgid=137472 (accessed on 8 February 2013).

443 Gong Xin Bu Lian Chan Ye (2013) No. 16, Guiding Opinions on Accelerating the Merger and Reorganization of Enterprises in Key Industries (original text in Chinese), available at: http://www.gov.cn/zwgk/2013-01/22/content_2317600.htm, (accessed on 8 February 2023). The Mergers GO spell out the official policy to undertake industrial concentrations of domestically-invested companies in selected sectors, such as automotive, steel, cement, shipbuilding, electrolytic aluminium, rare earths, electronic information, pharmaceuticals or agriculture industries.

444 See Zhong Fa (2014), Opinions of the State Council on Further Optimizing the Market Environment for Enterprise Mergers and Reorganizations No. 14, Promulgated on 7 March 2014, available at: http://www.gov.cn/zhengce/content/2014-03/24/content_8721.htm (accessed on 13 February 2023).

445 See Main Objectives and Key Tasks of the Mergers GO, Chapter 2 (emphasis added).

-to foster the development of the non-public economy and of SMEs,
-to improve the economic fundamental system allowing the development of the public ownership economy as a pillar together with the development of the diversified ownership economy. (emphasis added)

The consolidation plans resulted in a growing number of SOE restructurings[446], including a series of SOE mega-mergers, for instance between the railway vehicle manufacturers China North Locomotive & Rolling Stock Industry and China South Locomotive & Rolling Stock in 2014[447], between the shipping groups COSCO and China Shipping in 2015[448], between the mining conglomerates China Metallurgical Group Corporation and China Minmetals Corporation ('*China Minmetals*') in 2015[449], between the steel producers Baosteel Group Corp. and Wuhan Iron & Steel Group Corp. in 2016[450], between the textile equipment maker China Hi-Tech Group Corp. and China National Machinery Industry Corp in 2017[451], between the coal miner Shenhua Group Corp. and the energy utility Guodian Group Corp. in 2017[452], between the shipbuilding groups China State Shipbuilding Corporation and China Shipbuilding Industry Company in 2019[453] and between the chemical groups Sinochem and ChemChina in 2021[454]. Streamlining the structure of existing SOEs into large industrial groups - with sometimes hundreds of subsidiaries and operations covering entire industrial chains from raw materials extractions to end user products and services[455] - facilitates in turn the state's goal of

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446 The restructuring process and the corporatisation of SOEs mentioned in Section 5.5.1 are taking place in parallel and complement each other.

447 See Zhong, N., (2014), *Two Railway Giants Announce Merger,* China Daily, available at: http://www.chinadaily.com.cn/business/2014-12/31/content_19206058.htm (accessed on 10 February 2023). See also Mizuho Securities Asia Ltd (2015), *Mizuho Economic Research report of 5 June 2015*.

448 See Chiu, J. and Paris, C. (2015). *China Approves Merger of Cosco, China Shipping*. The Wall Street Journal, available at: http://www.wsj.com/articles/china-approves-merger-of-cosco-china-shipping-1449834748 (accessed on 10 February 2023). See also European Union Chamber of Commerce in China (2017), *China Manufacturing 2025, putting industrial policy ahead of market forces,* p. 19.

449 See for example Hornby, L. (2015). *Beijing orchestrates mining merger between Minmetals and MCC,* Financial Times; available at: https://www.ft.com/content/6df65a0a-9d99-11e5-8ce1-f6219b685d74 (accessed on 10 February 2023).

450 See Wu, Y. and Yang, Z. (2016), Big merger forms No 2 steel giant, *China Daily*, available at: http://usa.chinadaily.com.cn/business/2016-12/02/content_27545506.htm (accessed on 10 February 2023).

451 See Feng, C. (2017). *Machinery Giants Merge as Industry Reform Plow Ahead*. Caixin Global; available at: http://www.caixinglobal.com/2017-07-03/101109351.html (accessed on 10 February 2023).

452 See O'Connor, S. (2018). *SOE Megamergers Signal New Direction in China's Economic Policy*. U.S.-China Economic and Security Review Commission, available at: https://www.uscc.gov/sites/default/files/Research/SOE%20Megamergers.pdf (accessed on 10 February 2023).

453 See for example: https://www.maritime-executive.com/article/csic-cssc-re-merger-completed (accessed on 13 February 2023).

454 See *Government clears merger of SinoChem and ChemChina*, available at: https://www.chemistryworld.com/news/government-clears-merger-of-sinochem-and-chemchina/4013530.article (accessed on 10 February 2023). Other SOE mergers have been seen e.g. in the energy, food and agriculture or construction sectors.

455 The Shenhua Group active in coal mining, electricity generation, new energy, coal-to-chemicals production, railway transport, port handling, and shipping represents an example (see at: www.csec.com/zgshwwEn/gsjj/gsjjList.shtml (accessed on 10 February 2023)), the COSCO group which describes its operations as "*upstream and downstream links along the industry chain, such as shipping, terminals, logistics, shipping finance, ship repair and shipbuilding*" being another one (see at: https://en.coscoshipping.com/col/col6918/index.html (accessed on 10 February 2023)).

SEI"*exerting control and implementing development policies through the networks organized around the core companies*"[456]. With SOEs thus serving as important levers in the Chinese government's steering of the economy, most recently exemplified by their role in stabilising the economy during the 2020 coronavirus pandemic, it can be expected that, instead of shutting down unproductive SOEs in the face of private sector competition, the practice of SOE megamergers will continue[457]. It is worthwhile noting that the State Council emphasized already in 2016 the fact that "*the regrouping is not a simple reduction of the number of central SOEs as their assets expanded seven times during the past 13 years*"[458] and that it also explicitly articulated its intention to "*fortify and strengthen a group of central SOEs*"[459]. The creation of the China Mineral Resources Group in 2022[460] represents another example of how the policy to consolidate and strengthen SOEs continues. The group was set up with a registered capital of approximately EUR 3 billion and its tasks are to engage in exploration of mineral resources, ore mining, the import and export of minerals, as well as supply chain management services, investment activities and asset management. The purchasing needs of state-owned companies such as the China Baowu Steel Group, Ansteel, China Minmetals and Shougang Group would be included in the purview of the China Mineral Resources Group, giving Chine a greater bargaining power in iron ore pricing worldwide.

However, the government intervention into reshaping the corporate landscape goes much further than merely consolidating central SOEs. Chinese industrial policies grow ever more complex, encompassing new sectors, such as the SEIs (see Sections 2.3.2, 4.2.1 and 5.2), as well as new objectives, such as technological independence and global competitiveness (see Section 4.2.5). Such new areas of industrial policies pose additional challenges – for example, attracting the necessary expertise from the private sector to SOEs may be impossible[461] – in response to which the government goes well beyond the comparatively simple and common tool of mergers shaping the SOE sector. Additional tools include the abovementioned GGFs (see Chapter 6 for more details) and the promotion of '*national teams*' between state-owned and private companies. The latter approach seems more pragmatic and may be characterized by the broad government slogan '*market-driven and government-steered*'[462]. Nevertheless, the ongoing streamlining of the central SOEs, clearly confirms that creating a limited number of state-controlled entities which can serve the national industrial strategies in pillar industries

456 Lin, L. and Milhaupt, C. (2013). *We are the (National) Champions: Understanding the Mechanisms of State Capitalism in China*? Stanford Law Review Vol. 65:697, p. 730.

457 European Union Chamber of Commerce in China (2021), *European Business in China Position Paper 2021/2022*, p. 22.

458 See State Council website. (2016). *China to further regroup central State-owned enterprises*; available at: http://english.gov.cn/policies/policy_watch/2016/08/23/content_281475423704259.htm (accessed on 10 February 2023).

459 See 2016 Guiding Opinions, point 3(1).

460 See Launch ceremony for China Mineral Resources Group held in Beijing, available at: https://www.globaltimes.cn/page/202207/1271377.shtml (accessed on 10 February 2023).

461 European Union Chamber of Commerce in China (2021). *European Business in China Position Paper 2021/2022*, p. 93.

462 See Naughton, B., *The Rise of China's Industrial Policy 1978 – 2020* (2021), p. 100, available at: https://dusselpeters.com/CECHIMEX/Naughton2021_Industrial_Policy_in_China_CECHIMEX.pdf, (accessed on 10 February 2023).

remains a time-tested mechanism by which the Government can exercise its control over the industry.

5.5.2. Government control over SOEs through Personnel Management and CCP Presence

A second channel of Chinese government's control over SOEs is the persisting influence over appointments of key management personnel, as well as the ever-stronger presence of the Communist party organizations in SOEs.

Formally, SASAC and local SASACs are competent to control the composition of SOEs' management. This follows from Articles 12 and 22 of the SOE Law as well as Article 13 of the SASAC Regulation. Article 12 of the SOE Law specifies that "*a body performing the contributor's functions on behalf of the corresponding people's government shall enjoy the return on assets, participation in major decision-making, selection of managers and other contributor's rights to the state-invested enterprises according to law.*" Article 22 of the SOE Law spells out the role of such bodies in relation to senior staff of SOEs:

> *A body performing the contributor's functions shall, according to laws, administrative regulations and enterprise bylaws, appoint or remove, or suggest the appointment or removal of the following personnel of a state-invested enterprise: (1) Appointing and removing the president, vice-presidents, person in charge of finance and other senior managers of a wholly state-owned enterprise; (2) Appointing and removing the chairman and vice-chairmen of the board of directors, directors, chairman of the board of supervisors, and supervisors of a wholly state-owned company* [...].

According to Article 13 of the SASAC Regulation, one of SASAC's main responsibilities is to "*appoint or remove the responsible persons of the invested enterprises and evaluate their performance in accordance with the statutory procedures, and grant rewards or impose punishments based on the evaluation results*"[463]. The fact that SASAC appoints and removes managers of SOEs is a sign of significant State influence considering the scale of SOEs and the dominant role of the state-owned economy in China.

The State's influence is further strengthened by the way the CCP is involved in the appointment process. Indeed, the State Council Guiding Opinions on SOE Corporate Governance ('*Corporate Governance GO*') from April 2017[464] contain a direct mandate for the Party to set the procedures and recommend candidates for SOE managers formally appointed by the boards of directors[465]. At the same time, "*the secretary of the Party group (Party committee) and the chairman of the board of directors shall in general be the same person and further work shall be done for the full-time deputy secretary to join the board of directors*"[466]. The Corporate Governance GO therefore effectively conferred on the Party the power to exercise significant

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463 See SASAC Regulation, Article 13(4).

464 Guiding Opinions of the General Office of the State Council on Further Improving the Corporate Governance Structure of State-owned Enterprises (promulgated on 24 April 2017; Guo Ban Fa [2017] No. 36).

465 Corporate Governance GO, Article II.5.(3).

466 *Ibid.*

influence within the SOE's central decision-making body, as well as to nominate the SOE's management. This is what the Corporate Governance GO described as: "*inherent combination of the principle of cadre management by the Party with the selection and appointment of managers by the board of directors*" or "*leadership system of bi-directional entry and cross holding of posts*"[467].

The SASAC Notice summarises the system of controlling the SOEs' personnel as follows[468]:

> *The principle of Party governance over cadres shall always be combined with market-oriented mechanisms. It is necessary to safeguard the Party's leadership over the personnel work of cadres and its right to manage important cadres, and strictly adhere to the criteria of loyalty to the Party, boldness in innovation, competency in corporate governance and enterprise development and upright and clean characters in selecting and appointing SOE leaders. The Party organizations of SOEs shall tighten control in terms of determining criteria, standardizing procedures, participating in assessment, recommending candidates, etc., manage managerial members in accordance with the laws of the market, establish a scientific and reasonable appraisal and evaluation system, and set a clear orientation of positive incentives for SOE leaders.*

As for supervision by SASAC over SOE leaders after they are appointed, the Classification GO provides for the following with respect to commercial SOEs[469]:

> *The regulation of their State-owned assets shall be strengthened by primarily focusing on capital regulation, with emphasis being placed on effectively managing the layout of State-owned capital and making efforts to raise the return, standardize the operation, and safeguard the security of State-owned capital. It is imperative to establish and improve supervision institutions and mechanisms, disclose information pursuant to laws and regulations, strictly pursue accountability, and prevent the loss of State-owned assets during reform and development. Specifically, commercial SOEs whose primary business belongs to industries and fields of sufficient competition shall focus on strengthening regulation at the group company level, effectively enforce and safeguard the lawful exercise of the rights to make material decisions, select and appoint personnel, distribute remunerations, etc. by the board of directors, ensure the business operation autonomy of the management, and actively promote the system of professional managers.*

However, with regard to commercial SOEs whose primary business belongs to major industries and key fields concerning national security or national economic lifeline, or that are mainly responsible for major special project tasks[470]:

> *It is required to focus efforts on strengthening the regulation of the layout of State-owned capital, and guide such enterprises to highlight their primary business and better serve major strategies and macro-control policies of the State.*

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467 *Ibid.*
468 See SASAC Notice, Point 2(5).
469 Classification GO, Section 2(3).
470 *Ibid.*

In practice, concerning the central SOEs – all of which are complex multi-layered structures of numerous legal entities, typically with a SASAC wholly-owned group company at the top of that structure – the CCP Central Organisation Department[471] appoints top executives of the group companies for the '*important backbone state-owned enterprises*'. The top management of the remaining central SOEs, as well as of local SOEs, is nominated by SASAC in coordination with the local governments[472] (see also Section 3.3)[473]. Effectively, this system results in government officials (usually being CCP members at the same time – see Section 3.2) being appointed SOE managers and/or board members and, conversely, SOE managers returning back to take up government functions[474]. Naturally, the more prominent an SOE, the more senior CCP members tend to be appointed - approximately 10% of the alternate members of the CCP Central Committee serve as executives in the largest central SOEs, such as Sinopec or ICBC[475]. Such organisational set-up not only ensures effective control of government agencies over SOEs, it also solidifies and reinforces the manifold informal but important ties between the State and its enterprises. In addition, such environment is conducive to corruption by individuals holding managerial positions in SOEs – President Xi's anticorruption campaign[476] and the government's attempts to put in place at least some additional controlling mechanisms[477] to curb such undesirable behaviour being a proof.

In addition to controlling SOEs through appointing the management personnel, the CCP's general claim to leadership, as well as its organizations in individual enterprises (see Section 3.4.1), represent a further channel which state authorities employ to exercise their influence over the activities of SOEs. President Xi Jinping stated in October 2016 at a meeting in which both senior government officials and SOE executives participated that "*Party leadership and*

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471 The party organ entrusted with management of elite cadres.

472 Rosen, D.H., Leutert, W., Shan G. (2018), p. 15.

473 See SASAC announcement about personnel changes in central SOEs (original text in Chinese), available at: http://www.sasac.gov.cn/n2588035/n2588325/index.html (accessed on 10 February 2023).

474 See Kratz, A. (2013). *Reforming China' State-owned Enterprises, China perspectives*, no. 2013/1. For instance, it has been reported that in 2012 among 183 upper-echelon employees (deputy-minister and above) in 19 Ministries and Commissions, 56 have had experience in managing an SOE. Specific examples of this system entail for instance consecutive top managerial position of one individual at the Chalco/Chinalco conglomerate and at SASAC (see Komesaroff, M. (2016). *Return of the Line Ministries*, China Economic Quarterly, Vol. 20 No. 2. Gavekal Dragonomics) or sequences of government posts and managerial positions in a number of energy SOEs held by close relatives of other high ranking government officials (see Hornby, L. (2017). *China's consolidation push turns to sprawling power sector.* Financial Times; available at: https://www.ft.com/content/50614ed4-4c69-11e7-919a-1e14ce4af89b (accessed on 16 June 2017). For further examples of rotation of cadres between SOEs see e.g. The Economist (2012). *State Capitalism is Not All the Same*, available at: http://www.economist.com/node/21542924 (accessed on 10 February 2023).

475 See *How Dominant are Chinese Companies Globally?*, available at: https://chinapower.csis.org/chinese-companies-global-500/ (accessed on 10 February 2023).

476 Leutert, W. (2016). *Challenges Ahead of China's Reform of State-Owned Enterprises*. Asia Policy No. 21, p. 93; Naughton, B. (2016). *State Enterprise Reform: Missing In Action*. China Economic Quarterly June 2016. Gavekal Dragonomics. Concerning the alleged ulterior motives of the anticorruption campaign, see for example Feng, E. (2021). *How China's Massive Corruption Crackdown Snares Entrepreneurs Across The Country*, available at: https://www.npr.org/2021/03/04/947943087/how-chinas-massive-corruption-crackdown-snares-entrepreneurs-across-the-country (accessed on 10 February 2023).

477 Leutert, W. (2016). *Challenges Ahead of China's Reform of State-Owned Enterprises*. Asia Policy No. 21, p. 93; available at: https://www.brookings.edu/articles/challenges-ahead-in-chinas-reform-of-state-owned-enterprises/ (accessed on 10 February 2023).

building the role of the party are the root and soul for state-owned enterprises. [...] *The Party's leadership in state-owned enterprises is a major political principle, and that principle must be insisted on.* [...] *The weakening, fading, blurring or marginalisation of Party leadership in state firms will no longer be tolerated*"[478]. This was echoed in several documents issued by the CCP Central Committee in May 2021, namely, the Opinions on Strengthening Party Leadership in Improving Central SOEs' Corporate Governance[479], and the Regulations on Organisational Work of the CCP[480]. Both documents invoke Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era and stress the need for strengthening the leadership role of the CCP.

The formal framework for the Party's role, within which further specific implementing actions can take place, is also stipulated in the existing legislation, such as Article 19 of the Company Law (according to which "[i]*n a company, an organization of the Communist Party of China shall be established to carry out the activities of the party* [...]. *The company shall provide the necessary conditions for the activities of the party organization.*"), Article 33 of CCP Constitution (see Chapter 3), as well as Point 7(24) of the Guiding Opinions (see Section 5.3). Shortly after the publication of the Guiding Opinions, the requirement for SOEs to integrate the Party into their corporate governance was further elaborated in a document called Several Opinions on Adhering to Party Leadership and Strengthening Party Building in Deepening the Reform of SOEs, issued by the General Office of the CCP Central Committee[481].

The more detailed implementing provisions on the widely reported process of strengthening the party-building work in the state-owned sector[482] can be found in particular in the Corporate Governance GO. Article I.2.(2) lays down, among others, also the principle of the leadership by the Party:

> [...] *it is imperative to* [...] *unify the strengthening of the Party's leadership with the improvement of corporate governance, specify the legal status of the Party's organization of the State-owned enterprises in the corporate governance structure, bring into play the leadership core role and political core role of the Party's organization in the State-owned enterprises and ensure that the Party's organization determines the direction, manages the overall situation and guarantees the implementation.*

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478 Feng, E. (2016). *Xi Jinping Reminds China's State Companies of Who's the Boss*. New York Times; available at: https://www.nytimes.com/2016/10/14/world/asia/china-soe-state-owned-enterprises.html?_r=2 (accessed on 11 April 2017).

479 Full text of the Opinions has not been published as or writing of this report. However, the main elements are available at: www.gov.cn/zhengce/2021-05/30/content_5614000.htm (accessed on 10 February 2023).

480 *The Central Committee of the Communist Party of China issued the Regulations on the Organization and Work of the Communist Party of China* (original text in Chinese), promulgated on 22 May 2021, available at: http://www.gov.cn/zhengce/2021-06/02/content_5615053.htm (accessed on 10 February 2023).

481 See: http://theory.people.com.cn/n/2015/0921/c49150-27611630.html (accessed on 10 February 2023).

482 European Union Chamber of Commerce in China (2017). *China Manufacturing 2025, putting industrial policy ahead of market forces,* p. 19-20.; Hornby, L. (2016). *China rows back on state-sector reform,* Financial Times; available at: https://www.ft.com/content/92e52600-31f7-11e6-ad39-3fee5ffe5b5b (accessed on 23 March 2017); U.S.-China Economic and Security Review Commission (2016). *Annual report to Congress*, p. 92.

Subsequently, in Section II, the Corporate Governance GO call for standardization of subject rights and responsibilities with respect to SOE governance. Party organizations are considered to be one of the relevant SOE corporate governance subjects, along with the board of shareholders, board of directors, management, board of supervisors and the staff representative assembly. Article II.5.(1) stipulates: "*Sticking to Party's leadership and strengthening Party's construction are the unique advantages of State-owned enterprises.*" Moreover:

> *the legal status of the Party's organization in the corporate governance structure of the State-owned enterprises shall be specified, the overall requirement of the Party construction work shall be included in the articles of association of State-owned enterprises and rights, responsibilities and work method of Party organization in decision-making, execution and supervision shall be specified to make Party organization an integral part of corporate governance structure of enterprises. The role of Party organization as the leadership core and political core shall be brought into full play to* [...] *support the performance of duties by the board of directors, board of supervisors and the management in accordance with the law and guarantee the implementation of guidelines and policies of the Party and the State.*

The SASAC notice contains very similar language:

> *It is required to clarify and enforce the statutory status of Party organizations in the corporate governance structures of SOEs, include the overall requirements on Party building into the articles of association of companies, fine-tune the rules and procedures for Party organizations to participate in the decision-making of major issues, and enable Party organizations to play their role in an organized, institutionalized and concrete manner; and, properly handle the relationship between Party organizations and other governance parties, make clear the boundaries of power and responsibility, and achieve seamless convergence*[483].

The ever stronger CCP presence in managing the SOEs' affairs envisaged by the Corporate Governance GO has typically been indeed formalized at the company level by referring to the leading role of the Party in the respective Articles of Association of various SOEs[484], in line with SASAC's 2017 Notice on Matters Regarding Speeding Up the Incorporation of Overall Requirements for Central State-owned Enterprises' Party-Building Work into Articles of Association[485] and with CSRC's (see Chapter 6) 2018 Code of Corporate Governance for Listed Firms[486]. Such changes would entail language on the *"organised, institutionalised and concrete*

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483 See SASAC Notice, point 2(5).

484 Including enterprises like Sinopec or the China Railway Group, as well as state-owned banks (see Section 3.4).

485 See for example Blanchette, J. (2020). *From "China Inc." to "CCP Inc.": A New Paradigm for Chinese State Capitalism*, available at: https://www.prcleader.org/blanchette (accessed on 10 February 2023). See also: http://www.sasac.gov.cn/n2588025/n4423279/n4517386/n9320196/c9321179/content.html (accessed on 4 March 2022).

486 See Rosen, D.H., Leutert, W., Shan G. (2018), p. 24, as well as here: Announcement No. 29, Code of Governance for Listed Companies (original text in Chinese), available at: http://www.csrc.gov.cn/csrc/c101864/c1024585/content.shtml (accessed on 10 February 2023). To be noted that making Party committees part of the managerial / decision-making structure of companies has

way" in which CCP should play a role in an SOE, as well as on *"providing direction* [and] *managing the overall situation*"[487].

In fact, the leading role of the CCP has in recent years been emphasized in virtually all SOE-related[488] policy documents[489], thereby being fully institutionalized[490]. What is more, the requirement to amend their articles of association to recognize the role of CCP organizations in corporate governance was made binding on all SOEs under a CCP Central Committee's regulation from December 2019[491]. The latest details on the leading role of the CCP were developed in the aforementioned Opinions on Strengthening Party Leadership in Improving Central SOEs' Corporate Governance from May 2021. The opinions require the central SOEs to further unify the strengthening of the party's leadership and improve corporate governance and accelerate the improvement of the modern enterprise system with Chinese characteristics. Moreover, these opinions put forward that the CCP committee (group) in central SOEs has a statutory position in the corporate governance structure and that it plays a leading role in the company's direction, overall management, and implementation. They also make clear the scope of responsibility of the CCP committee (group) of central SOEs in discussing and deciding major issues as well as relevant requirements and procedures, and, most importantly, clarify the way the CCP committee (group) plays a role in the decision-making of the board of directors and executives.

China publicly acknowledges that articles of association of a vast number of companies have codified such position of the CCP within the corporate governance structure. An article published in the People's Daily on 11 October 2021 states in plain terms that "*all central enterprises and more than 90 percent of provincial SOEs have included Party building requirements into their articles of association, so as to consolidate the legal status of the Party organization in the corporate governance structure*"[492]. Moreover, SOEs throughout the country have consistently appointed CCP members to key corporate bodies: all central SOEs, more than 90% of provincial-level SOEs and 80% of municipal and county-level SOEs have

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been taking place well beyond SOEs and has been affecting also privately owned companies or joint-ventures between SOEs and private entities. See Michael, M. (2017). *Exclusive: In China, the Party's push for influence inside foreign firms stirs fears.* Reuters; available at: https://www.reuters.com/article/us-china-congress-companies-idUSKCN1B40JU (accessed on 13 February 2023). See also Buckley, C., Bradsher, K. (2020). *China's Communists to Private Business: You Heed Us, We'll Help You*, The New York Times; available at: https://www.nytimes.com/2020/09/17/business/china-communist-private-business.html (accessed on 6 January 2022).

487 See Hughes, J. (2017). *China's Communist party writes itself into Company Law.* Financial Times; available at: https://www.ft.com/content/a4b28218-80db-11e7-94e2-c5b903247afd (accessed on 18 August 2017).

488 For role of CCP in private enterprises, see also Chapter 3.3.2

489 Specifically for state-owned financial enterprises, see the Interim Measures for the Administration of Directors Representing State-owned Equity in Financial Institutions from December 2019 (original text in Chinese), available at: jrs.mof.gov.cn/zhengcefabu/202001/t20200114_3458879.htm, (accessed on 10 February 2023).

490 See Rosen, D.H.; Leutert, W.; Shan, G. (2018), p. 6, 23.

491 Regulations on the Work of the Primary Organizations of the Communist Party of China in State-owned Enterprises (for Trial Implementation), Article 13 (original text in Chinese), available at: http://www.gov.cn/zhengce/2020-01/05/content_5466687.htm (accessed on 10 February 2023).

492 See Liu, W., Meng, X. (2021). *Party building is implemented and development shows more advantages* (original text in Chinese), available at: http://paper.people.com.cn/rmrb/html/2021-10/11/nw.D110000renmrb_20211011_3-01.htm (accessed on 10 February 2023).

implemented the system under which their Party committee and board of directors share the same leader[493]. As a result, just as the policy documents described in the previous paragraph intended, "*it has become a firm routine in many SOEs to carry out the research and discussion on major operation and management matters among the members of Party organizations before decisions are made, so as to reflect the intention of the Party organization*"[494]. Therefore, the CCP has a strong and direct role in shaping corporate decisions of SOEs.

5.6. CHAPTER SUMMARY

In China, SOEs represent an important and comparatively large portion of the national economy (see Section 5.2). They will continue to do so for the foreseeable future. According to the relevant laws and policy documents, the state-owned economy is explicitly considered as a pillar of the Chinese socialist market economy. The IMF estimated in 2021 that Chinese SOEs accounted for some 39% of total industrial corporate assets and for about the same portion of corporate debt (see Section 5.2). These figures were likely underestimated, not least because they did not include JVs that SOEs held together with private companies. SOEs are increasing their presence in the service economy, and it remains constantly high in utilities, the finance sector, telecommunication, the transport industry and a broad range of manufacturing industries including steel and chemicals.

The existing legal framework is based on the principles of the socialist market economy in which the development and the consolidation of the state-owned economy feature among the central principles. The particular role of SOEs (*'the leading force in the national economy'*) is anchored in the Constitution and the relevant constitutional principles are reiterated and elaborated in both primary and secondary legislation. It falls upon the State to ensure the consolidation and growth of the state-owned economy (see Section 5.5). Consequently, the applicable laws confer upon the government significant powers which allow it to effectively control SOEs, be it via dedicated supervision bodies – SASAC and local SASACs, or by directly participating in the operational decision-making of SOEs (see Section 5.5.2). In addition, the relevant legal framework also provides for an important role of the CCP (see Section 5.3).

Against this background, the Chinese government and Party have not shied away from exercising the powers available. In particular, the authorities have engaged in shaping the structure of the state-owned sector by policies of consolidation through mergers (see Section 5.5.1) which can pursue various purposes, such as to avoid the closure of facilities contributing to excess capacity by putting ailing companies under the wings of a stronger partner or to create national and even international champions. Chinese authorities have further continued controlling the behaviour of SOEs by means of nominating and dismissing its management, as well as by making the Party involved in SOEs' decision-making (see Section 5.5.2). Moreover, the Chinese government has developed a number of novel instruments and policies which extend the reach of the state sector – and therefore of the state authorities – into the privately owned enterprises and serve the long-term goals of achieving technological independence and

493 *Ibid.*
494 *Ibid.*

strategic dominance (see Section 3.3.2 and Chapter 2). In any event, while the motivations of specific instances of supervision and guidance over SOEs may vary, the overall developments in China confirm that the goals of market-oriented reforms, which may have been present in the State authorities' considerations still around 2013 (see Section 5.3), gave way to the Government's determination to further develop the dominant role of the state-owned economy, in particular by selectively creating large SOEs, shielded from competition domestically and expanding internationally. Such SOEs are meant to serve the Government's strategic industrial policies rather than focus on their own economic performance (see Section 5.5). In other words, the management of SOEs does not appear to be conducted on an arm's length basis, contrary to normal practice in modern market-based economies.

Such an overall institutional setup and legal environment are conducive to business practices which have been amply documented with relation to Chinese SOEs, such as preferential access to finances (see Chapter 6), protection by market access restrictions (see Chapter 8), preferential access to land (see Chapter 9), energy (see Chapter 10), etc., and which result in distorting the effective allocation of resources.

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6.1. INTRODUCTION

The Chinese financial sector plays a fundamental role in the country's economic performance. Throughout the past decades of reform, China's financial system has undergone a transformation, moving from a '*monobank*' system to a '*multi-layered*' system with specialized roles[495]. Nevertheless, the Chinese financial system is still characterized by the central role played by the State, as well as by strong institutional and regulatory controls, which the State uses to implement a wide array of policies. The significant State presence and influence over the financial sector remained a constant, irrespective of what particular industrial policy the Chinese authorities were pursuing at any given moment, or where the Government's priorities for the financial sector lied on the axis between stimulating rapid economic growth and reducing systemic financial risks.

6.2. OVERVIEW OF THE CHINESE FINANCIAL SYSTEM

6.2.1. HISTORICAL BACKGROUND

Before 1984, the People's Bank of China ('*PBOC*') – a department of the Chinese government under the State Council – served as the primary financial intermediary in China, and the private banking sector virtually did not exist. Since then, China has been trying to move towards a more commercially oriented financial system. This has been underpinned by reforms that included recapitalizing the banking system, creating new capital markets, introducing a prudential regulatory regime, reforming the joint-stock banks and the rural credit cooperatives, taking steps to reform interest rate and exchange rate policies and partially opening the financial system following China's WTO accession, including a limited opening of the system for foreign banks since 2006. In the securities sector, key companies have been restructured, and a resolution mechanism and investor protection scheme set up[496].

6.2.2. CURRENT INSTITUTIONAL SETUP OF THE CHINESE FINANCIAL SYSTEM

The present-day institutional setup of China's financial sector is the result of periodic reforms against the background of the sector's growing size and complexity, reflecting the regulatory and policy priorities of the Chinese authorities, not least in the wake of financial crises or

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495 *Progress in China's Banking Sector Reform: Has Bank Behaviour Changed?*, IMF Working Paper WP/06/71 2006, IMF, 2006, p. 3.

496 *People's Republic of China: Financial System Stability Assessment*, Country Report No. 11/321, IMF, 2011, p. 19.

regulatory failures[497]. For example, China's financial sector's supervisory model was for a long period of time based on the central role of the PBOC[498], with its primary role to carry out the monetary policy of the country and to control systemic risk, with three specialised agencies, namely the China Banking Regulatory Commission ('*CBRC*'), the China Insurance Regulatory Commission ('*CIRC*') and the China Securities Regulatory Commission ('*CSRC*')[499] supervising the respective subsectors of banking, insurance and securities. This setup was overhauled in 2017-2018[500], when CBRC and CIRC were merged into the China Banking and Insurance Regulatory Commission ('*CBIRC*') as the primary institution in charge of supervision for both the banking and insurance subsectors[501]. Moreover, a new body headed by a vice-premier, the Financial Stability and Development Committee ('*FSDC*'), was established in 2017, with a broad array of responsibilities: to implement the decisions of the CCP Central Committee and the State Council in the financial sector; to review major plans for the reform and development of the financial sector; to make overall plans for the development and regulation of financial reform; to coordinate matters related to monetary policy and financial regulation; to coordinate major financial regulatory issues and related fiscal and industrial policies; to analyse and judge the international and domestic financial situations, to cope with international financial risks, to study systematic financial risk prevention and to maintain major financial stability policies[502].

As of writing of this Report, the central institutions supervising China's financial sector were undergoing further reforms. In May 2023, in the context of the organisational changes after the 20th CCP Congress, the National Financial Regulatory Administration ('*NFRA*')[503], directly under the State Council, replaced the CBIRC, acquiring also additional competencies regarding protecting financial consumers and investors protection from the PBOC and CSRC in the

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497 China implements the international Basel III standards on banking regulation and is therefore formally considered to be closely aligned with the international standards. The Regulatory Consistency Assessment Programme ('*RCAP*') published in September 2013 was instrumental for the EU decision on banking equivalence in December 2014. It should be noted, however, that the RCAP focuses on the domestic implementation of Pillar 1 minimum requirements and leaves out the assessment of Pillar 2 and Pillar 3 requirements, leaving space for the supervisor to accommodate industrial perspectives in its work at the expense of prudential considerations (consistency with disclosure requirements is not formally assessed).

498 The main functions of the PBOC can be consulted on its website available at: http://www.pbc.gov.cn/english/130712/index.html (accessed on 22 August 2023).

499 The main functions of the CSRC can be consulted on its website available at: http://www.csrc.gov.cn/csrc_en/c102023/common_zcnr.shtml (accessed on 22 August 2023).

500 For details concerning the motivations behind this institutional reform, see, for example, Chorzempa, M. and Véron, N., *Will China's new financial regulatory reform be enough to meet the challenges?*, Bruegel Policy Brief, 2023; available at: https://www.bruegel.org/sites/default/files/2023-06/will-china%E2%80%99s-new-financial-regulatory-reform-be-enough-to-meet-the-challenges%3F-%288901%29_3.pdf (accessed on 22 August 2023).

501 The main functions of the CBIRC can be consulted on its website: https://www.cbirc.gov.cn/en/view/pages/ItemList.html?itemPId=974&itemId=975&itemUrl=About/Mandates.html&itemTitle=Mandates&itemPTitle=About%20the%20CBIRC (accessed on 12 January 2023).

502 See *The Financial Stability and Development Committee was established*, 8 November 2017; available at: http://www.gov.cn/xinwen/2017-11/08/content_5238161.htm (accessed on 22 August 2023).

503 See the Plan for the Reform of Party and State Organs, issued on 17 March 2023; available at: http://politics.people.com.cn/n1/2023/0317/c1001-32645833.html (accessed on 22 August 2023).

process[504]. Establishing the NFRA has been generally seen in the context of the CCP asserting more direct control over the financial sector. Under the Party's tighter control, the financial industry would better serve the real economy and comply with the goals of China's industrial policies, not least by channelling funds to priority industries[505]. Further adjustments of the institutional structure included in 2023 the (re)establishment of the Central Financial Commission, essentially a successor of the FSDC[506], with its tasks specified as follows[507]:

> *Strengthen centralized and unified leadership of the Party Central Committee over financial work, be responsible for the top-level design, overall coordination, overall promotion, and supervision and implementation of financial stability and development, study and deliberate major policies and major issues in the financial field, and serve as the decision-making and deliberation coordination body of the Party Central Committee.*

In addition to establishing the Central Financial Commission, a separate body named Central Financial Work Commission was foreseen to "[u]*niformly lead the work of the Party in the financial system, guide the political, ideological, organizational, work style, discipline, etc. of the Party in the financial system*"[508].

These changes were taking place in parallel with longer-term developments of eroding the PBOC's independence. Even though the PBOC never possessed the level of independence over monetary policy enjoyed by central banks in Western countries, it nevertheless traditionally functioned with a level of operational autonomy. However, in 2021, the PBOC underwent a tightening of CCP control, following a series of CCP disciplinary inspections of financial institutions[509], including the PBOC itself. As a result, PBOC's autonomy was significantly reduced. The relevant CCP officials, on the other hand, were quoted as follows: "*In the past period, the foundation for comprehensive and strict governance of the Party in the financial*

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504 See *China establishes national financial regulatory administration*, Xinhua, 18 May 2023; available at: https://english.www.gov.cn/news/202305/18/content_WS6465bd1ac6d03ffcca6ed27f.html (accessed on 22 August 2023); see further Chorzempa, M. and Véron, N., *Will China's new financial regulatory reform be enough to meet the challenges?*, as well as Wong, C. H. and Zhai, K., *China's Communist Party Overhaul Deepens Control Over Finance*, The Wall Street Journal, 16 March 2023; available at: https://www.wsj.com/articles/chinas-communist-party-overhaul-deepens-control-over-finance-technology-6acdd43c (accessed on 24 August 2023).

505 See, for example, He, L., *China names head of powerful new financial regulator as industry faces greater scrutiny*, CNN, 11 May 2023; available at: https://edition.cnn.com/2023/05/11/economy/china-nfra-new-chief-intl-hnk/index.html (accessed on 22 August 2023), as well as Wong, C. H. and Zhai, K., *China's Communist Party Overhaul Deepens Control Over Finance*, The Wall Street Journal, 2023.

506 See, for example, Cheng, E., *China revives ruling party control of financial oversight*, CNBC, 17 March 2023; available at: https://www.cnbc.com/2023/03/17/china-revives-ruling-party-control-of-financial-oversight.html (accessed on 22 August 2023).

507 See the Plan for the Reform of Party and State Organs, issued on 17 March 2023; available at: http://politics.people.com.cn/n1/2023/0317/c1001-32645833.html (accessed on 22 August 2023).

508 *Ibid.*

509 See, for example, *CPC launches disciplinary inspection of financial institutions*, Xinhua, 13 October 2021; available at: www.news.cn/english/2021-10/13/c_1310242528.htm (accessed on 22 August 2023).

sector was weak [...] *and the tendency of financial 'specialism' and the central bank 'exceptionalism' was prominent*"[510].

Apart from the above bodies, the influence of the State in the financial sector is channelled also through a number of further actors, playing various formal and informal roles:

- the NPC promulgates financial sector laws, while the State Council executes financial regulation and issues mandatory policy directives to all the financial regulatory and supervisory agencies;
- Central Huijin Investment Ltd. ('*Central Huijin*')[511] exercises rights and obligations as an investor in major state-owned financial enterprises on behalf of the State. The Ministry of Finance ('*MOF*') owns directly, as well as through Central Huijin, significant participations in the most important commercial banks of China. It is therefore the biggest shareholder of the Chinese banking system (see also Section 6.3), enabling the state to exercise oversight of the sector;
- The State Administration of Foreign Exchange ('*SAFE*') is responsible for the supervision and management of the foreign exchange market[512];
- The National Council for Social Security Fund has a dual role as an institutional investor and a stakeholder in some of the largest commercial banks[513].

Each of the above actors have their standard roles – ranging from ensuring stability of the financial system, to protecting market integrity, to consumer protection - ascribed to them by the corresponding legislation. However, as pointed out by Bruegel in 2023, the "*fundamental challenges hobbling China's financial system* [...] *are not linked to specific choices of supervisory architecture but rather to excessive CCP and state intervention, and the lack of supervisory independence resulting from China's CCP-dominated governance system*". Moreover: "*The high degree of state ownership and intervention in the financial sector is a defining feature of China's financial system, including through the mechanisms associated with the involvement of the CCP. State and CCP channels of influence include ownership, personnel appointments and more, all of which complicates financial supervision. The party-state interferes in multiple ways in the operational management of financial firms, through detailed regulations but also direct nudging (or heavy-handed direction) of capital and credit-allocation decisions*"[514].

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510 See Wei, L., *Beijing Reins in China's Central Bank*, The Wall Street Journal, 8 December 2021; available at: https://www.wsj.com/articles/beijing-reins-in-chinas-central-bank-11638981078 (accessed on 24 August 2023).

511 See Central Huijin Investment Ltd. – Company profile; available at: http://www.huijin-inv.cn/huijineng/About_Us/index.shtml (accessed on 22 August 2023).

512 The main functions of the SAFE can be consulted on its website available at: https://www.safe.gov.cn/en/MajorFunctions/index.html (accessed on 22 August 2023).

513 The main functions of the National Council for Social Security Fund can be consulted on its website available at: http://www.ssf.gov.cn/portal/yw/webinfo/2021/09/1632812253754637.htm (accessed on 22 August 2023).

514 See Chorzempa, M. and Véron, N., *Will China's new financial regulatory reform be enough to meet the challenges?*, Bruegel Policy Brief, 2023, p. 3 and p. 5; available at: https://www.bruegel.org/sites/default/files/2023-06/will-china%E2%80%99s-new-financial-regulatory-reform-be-enough-to-meet-the-challenges%3F--%288901%29_3.pdf (accessed on 22 August 2023).

Indeed, the CCP's control over the allocation of finances, as well as over the supervisory architecture of the financial sector represents a key feature of the present-day China. Various financial channels and tools have been created approximately between 2012 and 2022 which greatly enhanced the Party's ability to steer businesses. These channels - entailing revised SOE corporate governance (see Chapter 5), a range of special purpose funds (see Chapter 2), as well as controlling the money raising processes on capital markets – complement the traditionally existing State control over the banking sector (see Section 6.3) and provide ample flexibility to the State authorities to leverage the potential of the financial sector to achieve the desired economic and strategic outcomes[515].

Those outcomes and policies may focus on the financial sector itself - for instance when it comes to reducing vulnerabilities[516] in the system resulting from accumulated corporate debt and adjustments in the policies of implicit State guarantees[517] (see also Sections 6.7 and 5.4) – or at the economy at large – for instance with respect to developments in the equity and bond markets or concerning interest rates setting[518]. However, the economic assessment of such policies is not within the remits of this chapter[519] which focuses on the formal institutional and legal framework, analysing primarily instances of State presence within the financial sector which may result in behaviours, both by economic operators and by State agencies, motivated by Government-mandated objectives rather than by market forces.

6.3. BANKING SECTOR

6.3.1. OVERVIEW

China's financial system remains dominated by the banking sector, despite significant developments in the funding of the banking sector over the years[520]. The importance of the banking sector in the allocation of financial resources is encapsulated in one figure: despite the rapid growth of nonbanking financing in China, in 2019, almost two thirds of all credit in the

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515 See Naughton, B. and Boland, B., *CCP Inc., The Reshaping of China's State Capitalist System*, A Report of the CSIS Freeman Chair in China Studies, CSIS, 2023.

516 See *People's Republic of China: 2022 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the People's Republic of China*, Country Report No. 2023/067, IMF, 2023, p. 20; available at: https://www.imf.org/en/Publications/CR/Issues/2023/02/02/Peoples-Republic-of-China-2022-Article-IV-Consultation-Press-Release-Staff-Report-and-529067 (accessed on 22 August 2023).

517 See for instance He, W., *Eroding the Implicit Guarantee*, Gavekal Dragonomics, 1 December 2020.

518 See for instance Adams, N., Jacobs, D., Kenny, S., Russell, S., Sutton, M., *China's Evolving Financial System and Its Global Importance*, Reserve Bank of Australia, 2021, pp. 1-4, available at: https://www.rba.gov.au/publications/bulletin/2021/sep/chinas-evolving-financial-system-and-its-global-importance.html (accessed on 22 August 2023).

519 See instead, for example, Apostolou, A., Al-Harshimi, A., Ricci, M., *Financial risks in China's corporate sector: real estate and beyond*, ECB, 2022 or *Consultation-Press Release; Staff Report; and Statement by the People's Republic of China: 2021 Article IV Executive Director for the People's Republic of China*, IMF, 2022; available at: https://www.imf.org/en/Publications/CR/Issues/2022/01/26/Peoples-Republic-of-China-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-512248 (accessed on 22 August 2023).

520 See Wright, L. – Grasping Shadows, The Politics of China's Deleveraging Campaign, CSIS (2023), p. 21; available at: https://csis-website-prod.s3.amazonaws.com/s3fs-public/2023-04/230410_Wright_Grasping_Shadows.pdf?VersionId=23lg65zaQBlbwAKPTSQWtCxDaABjds7E (accessed on 11 March 2024).

economy was provided by banks[521] and by 2021, that ratio decreased only negligibly[522]. More specifically, according to the 2021 PBOC annual report[523], RMB-denominated bank loans represented 63.6% of aggregate financing to the real economy in China[524], compared to 22.4% for government bonds, 10.5% for corporate bonds and 3.9% for domestic equity financing by non-financial corporations[525]. The remaining portion of aggregate financing to the real economy were trust loans, banker's acceptances, designated loans, foreign currency loans, etc.

In terms of total assets, the banking sector has been consistently keeping its overwhelmingly leading position among financial institutions. The data on balance sheets of financial institutions at the end of 2021 – published by the PBOC – illustrates this leading position unambiguously[526] (see Table 6.1 below).

Table 6.1

	Outstanding value (trillion RMB)	***Year-on-year growth (%)***
Total assets	381.95	8.1
Banking institutions	344.76	7.8
Securities institutions	12.3	21.2
Insurance institutions	24.89	6.8
Total liabilities	346.58	7.9
Banking institutions	315.28	7.6
Securities institutions	9.35	24.4
Insurance institutions	21.96	6.9
Owners' equity	35.37	10.5
Banking institutions	29.48	10.7

521 Bisio, V., *China's Banking Sector Risks and Implications for the United States*, Staff Research Report of the US-China Economic and Security Review Commission, 27 May 2020, p. 4, available at: https://www.uscc.gov/sites/default/files/2020-05/Chinas_Banking_Sector_Risks_and_Implications_for_US.pdf (accessed on 22 August 2023).

522 See He, Z. and Wei, W., *China's Financial System and Economy: A Review*, National Bureau of Economic Research ('*NBER*'), Working Paper 30324, August 2022; available at: https://www.nber.org/system/files/working_papers/w30324/w30324.pdf (accessed on 22 August 2023).

523 The most recent one available as of writing of this report.

524 'Total social financing' is an indicator developed by the PBOC to measure the total funding of the real economy (defined as non-financial enterprises and households) by the financial system.

525 *Annual Report*, PBOC, 2021, p. 73.; available at: www.pbc.gov.cn/chubanwu/114566/115296/4833603/4847849/2023041110334773584.pdf (accessed on 22 August 2023).

526 The data is available at: http://www.pbc.gov.cn/en/3688247/3688978/3709143/4509019/index.html (accessed on 22 August 2023). See further Amstad, M., Sun, G., Xiong, W., *The Handbook of China's Financial System*, Princeton University Press, 2020.

Securities institutions	2.95	12.2
Insurance institutions	2.93	6.5

The banking sector is characterized by three predominant categories of state-owned and state-controlled banks, namely large state-owned commercial banks, joint-stock commercial banks, and State policy banks[527]. These three categories of banks are complemented by smaller city and rural commercial banks, often owned by local and provincial governments. In addition, 'shadow banking' still represents a sizeable portion of the sector.

6.3.1.1. STATE-OWNED COMMERCIAL BANKS

Large state-owned commercial banks were introduced in China in the late 1970s when four commercial banks were established or re-established so that the PBOC could concentrate on regulating the financial sector instead of functioning as a commercial actor. In 1979, after being established and subsequently abolished several times, today's Agricultural Bank of China ('*ABC*') was created to handle government financing of grain procurement and rural development. In the same year, the Bank of China ('*BOC*') took over the foreign currency portfolio. In 1984, the Industrial and Commercial Bank of China ('*ICBC*') started to finance China's SOEs. At the same time, the CCB, which had been part of the MOF, gained operational independence in order to provide loans to long-term state investment projects[528]. As of 2015, these four banks constituted the biggest players in the country's banking sector. Together with the Bank of Communications ('*BOCOM*'), which was officially classified as state-owned commercial bank in 2007, the five banks represented almost 37% of the total Chinese financial market in 2018[529]. The official classification of Postal Savings Bank of China ('*PSBC*') as a state-owned commercial bank in 2018 extended the number of financial entities in this category to six[530]. By the end of 2022, ABC, BOC, ICBC and CCB lead the top 10 worldwide banks ranking by total assets, with PSBC and BOCOM taking the 14th and 20th place, respectively[531]. In terms of total assets, the six large state-owned commercial banks accounted for more than 40% of the Chinese financial sector.

6.3.1.2. JOINT-STOCK COMMERCIAL BANKS

Joint-stock commercial banks are the second most important type of credit institution in the country. They have been established later (at the end of 2003) and the involvement of the state in them is more often indirect (e.g. through SOEs) than in the state-owned commercial banks

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527 See He, Z. and Wei, W., *China's Financial System and Economy: A Review*, NBER, Working Paper 30324, August 2022, p. 21; available at: https://www.nber.org/system/files/working_papers/w30324/w30324.pdf (accessed on 22 August 2023).

528 Shih, V.C., *Factions and Finance in China: Elite Conflict and Inflation*, Cambridge University Press, 2008, p. 31.

529 Amstad, M., Sun, G., Xiong, W., *The Handbook of China's Financial System*, Princeton University Press, 2020, p. 13.

530 See *Big Six Chinese Banks All Launch Digital Renminbi Wallets, Trial Initiatives for CBDC Accelerate*, China Banking News, 28 March 2021; available at: https://www.chinabankingnews.com/2021/03/28/big-six-chinese-banks-all-launch-digital-renminbi-wallets-as-trial-initiatives-accelerate/ (accessed on 22 August 2023).

531 See for example at: https://www.statista.com/statistics/434566/leading-banks-in-china-assets/ (accessed on 23 January 2023).

("top 6"). Accounting for approximately 20% of the total assets of the Chinese banking sector in 2021[532], a number of joint-stock commercial banks, including China Minsheng Bank, China Everbright Bank, Ping An Bank, Huaxia Bank, China Guangfa Bank, Shanghai Pudong Development Bank, China CITIC Bank and Bank of Jiangsu are considered systematically important for the financial sector by the PBOC. The same applies to the city commercial banks like Bank of Shanghai, Bank of Beijing and Bank of Ningbo[533]. It should be noted that according to the IMF Financial System Stability Assessment report of 2020, low levels of common equity tier 1 capital persist as structural problem in small banks, thereby constraining their capacity to provide credit[534].

6.3.1.3. STATE POLICY BANKS

State Policy banks are the third biggest player of the market with a proportion of ca. 9% of the total banking assets as of 2022[535]. The three State Policy banks, namely the China Development Bank ('*CDB*'), the Agricultural Development Bank of China ('*ADB*') and the Export-Import Bank ('*EXIM*') were established in 1994 to take over the policy portfolios of the state-owned commercial banks. They explicitly serve the purpose of financing state projects and sustaining economic development in key sectors and areas.

6.3.1.4. FOREIGN-INVESTED BANKS

Foreign-invested banks, on the other hand, did not and still do not play a significant role in China's banking sector[536]. This was partly due to limitations regarding ownership by foreign investors which were relaxed only in 2020 (see also Chapter 8), partly due to other persisting obstacles - such as the high number of state-owned potential customers, and the personal and political links between local banks and local customers preventing foreign players from gaining significant market share[537] - or which were even newly introduced – such as the restrictions for foreign banks to raise money overseas and transfer it into China[538]. As a result, in the second half of 2020, the proportion of foreign banks' assets to the total assets of banking financial institutions represented less than 1.5%. Among the foreign-invested banks, US and UK institutions have the largest footprint, with the market share of EU banks estimated at below 0.2%.

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532 See He, Z. and Wei, W., *China's Financial System and Economy: A Review*, NBER, Working Paper 30324, August 2022, p. 23; available at: https://www.nber.org/system/files/working_papers/w30324/w30324.pdf (accessed on 22 August 2023).

533 See the PBOC list of China's systematically important banks for 2022 available at: http://www.pbc.gov.cn/en/3688110/3688172/4437084/4655510/index.html (accessed on 22 August 2023).

534 *People's Republic of China: Staff Report for the 2020 Article IV Consultation*, IMF, 2020, p. 22.

535 See, for example, *Policy Banks Industry in China – Market Research Report*, updated on 23 May 2022; available at: https://www.ibisworld.com/china/market-research-reports/policy-banks-industry/ (accessed on 22 August 2023).

536 Foreign banks do, however, play a significant role in foreign currency clearing, trade finance, and serving foreign invested enterprises.

537 Elliott, D.J. and Yan, K., *The Chinese Financial System, An Introduction and Overview*, John L. Thornton China Center Monograph Series, Number 6, July 2013, p. 29; available at: https://www.brookings.edu/wp-content/uploads/2016/06/chinese-financial-system-elliott-yan.pdf (accessed on 24 August 2023).

538 See, for example, *China Puts Limits on Foreign Banks, Worrying Businesses*, The New York Times, 2 April 2021; available at: https://www.nytimes.com/2021/04/02/business/china-foreign-banks.html (accessed on 22 August 2023).

6.3.1.5. SHADOW BANKING

'*Shadow banks*' in China are financial firms that perform similar functions and assume similar risks as banks. However, they are not part of the formal banking sector. Definitions of the shadow banking sector vary, and can encompass any of the following instruments or institutions[539]:

- *Trust loans* are loans organised by trust companies, which are not considered banks. Trust companies combine elements of banks and asset managers. They can raise funds by issuing trust products, a form of securitized loan;
- *Entrusted loans* refer to loans made by non-financial firms to other firms (often within the same corporate group) that are channelled via the banking system for legal reasons, with banks indemnified from credit risk by the non-financial firm;
- *Banker's acceptances* are notes issued by banks promising a fixed payment in the future (usually a few months);
- *Financial leasing* involves all kinds of leasing that is not already on a bank or trust company balance sheet and not a short-term operating lease;
- *Microfinance companies, e-financing* (such as *crowdfunding*), *pawn shops, guarantee companies*, and other unofficial lenders. Some of these lenders are officially registered and regulated, others are operating informally, and sometimes even illegally;
- *Wealth management products* (*'WMPs'*) are issued by brokers and banks, off the balance sheet and considered as a substitute for deposits. They are a form of collective investment where the funds raised are typically used to purchase assets such as bonds and equities on the secondary market rather than providing direct loans.

There is a range of estimates on the size of China's shadow banking system. The estimates depend on the definition of shadow banking, the significant differences in the estimates being obviously linked to the opaqueness of the shadow banking activities. Financial Times cite figures of 39% - 45% of shadow lending share for the third and fourth quarter of 2019[540] and the IMF estimates that shadow banking represented some 16% of the GDP in 2021, down from 20.4% in 2020 and 22.4% in 2019[541]. Overall, studies agree that its size has increased relatively rapidly in the last two decades[542].

Figure 6.1: Evolution of shadow banking against other financing (in trillion RMB)[543]

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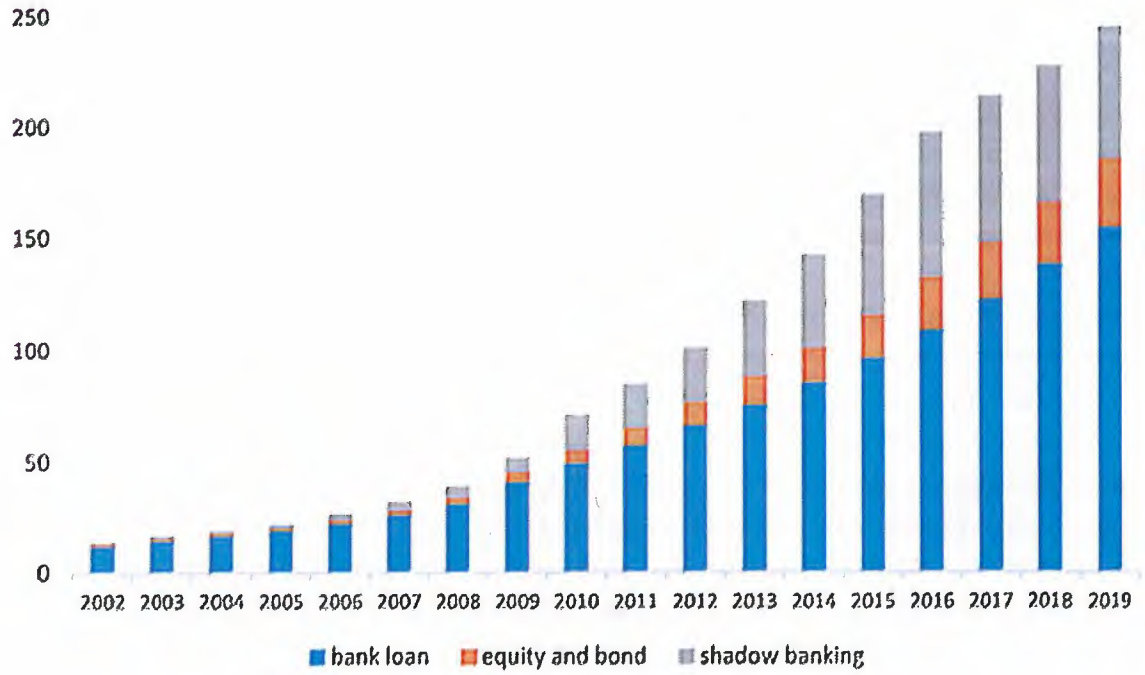
539 Elliott, D.J., Kroeber, A. and Qiao, Y., *Shadow banking in China: A primer*, Economic Studies at Brookings, The Brookings Institution, 2015, p. 7; available at: https://www.brookings.edu/articles/shadow-banking-in-china-a-primer/ (accessed on 22 August 2023). See also Wright, L. – Grasping Shadows, p. 12.

540 Weinland, D., *China's shadow banking industry roars back*, Financial Times, 25 September 2019; available at: https://www.ft.com/content/4c66b622-dea5-11e9-9743-db5a370481bc (accessed on 22 August 2023).

541 See *People's Republic of China: 2022 Article IV Consultation,* IMF, p. 46.

542 See, for example, Figure 2 in Allen, F., Gu, X., *Shadow banking in China compared to other countries*, The Manchester School, June 2020, p. 4.; available at: https://doi.org/10.1111/manc.12331 (accessed on 22 August 2023).

543 See *OECD Economic Surveys: China 2022*, OECD Publishing, 2022, Figure 1, p. 3.; available at: https://www.oecd-ilibrary.org/docserver/b0e499cf-en.pdf (accessed on 22 August 2023).



There are several reasons for the rise of shadow banking. First, the tight control by the State and state-owned actors of the financial system including the formal banking sector that extends also to the bond market (see Section 6.4.2). The general legal framework encourages lending in line with industrial policies, preferably to certain 'encouraged' sectors (see Section 2.3.2). Moreover, the restraints on access to the stock market make it difficult for firms that do not have government ties or do not fit in the State's visions and strategies to raise money on a stock exchange. Thus, the formal system is biased in favour of large and preferably state-owned entities. Smaller private players may face difficulties to raise capital which forces them to turn to unofficial forms of financing (see also Chapter 11).

Furthermore, banks were often restrained in the official system by caps on lending volumes, as well as by other capital and liquidity requirements[544]. While the 75% loans-to-deposits ratio was removed in 2015, other regulatory interventions – irrespective of whether in reaction to potentially destabilizing developments in certain sectors or politically motivated - followed in the more recent years: at the end of 2020, the PBOC capped real estate lending[545], while in 2021, CBIRC has decided to impose limits on the amount of capital that commercial banks commit to joint lending with 'fintech' companies[546]. Such limits have generally not applied in

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544 Elliott, D.J., Kroeber, A. and Qiao, Y., *Shadow banking in China: A primer*, Economic Studies at Brookings, The Brookings Institution, 2015, p. 5. See also *OECD Economic Surveys: China 2017*, OECD Publishing, 2017, p. 14; available at: https://www.oecd-ilibrary.org/docserver/eco_surveys-chn-2017-en.pdf (accessed on 24 August 2023).

545 See *China tightens regulation for loans to real estate sector*, Xinhua, 31 December 2020; available at: http://www.xinhuanet.com/english/2020-12/31/c_139633200.htm (accessed on 22 August 2023).

546 Riordan, P., *China tightens online lending rules in fresh blow to Jack Ma's Ant Group*, Financial Times, 21 February 2021; available at: https://www.ft.com/content/bc95392c-80db-4065-addd-40319b7024d1 (accessed on 22 August 2023).

the shadow banking system which, therefore, adds needed flexibility to a rigid and distorted financial system while, at the same time, also increasing the risk of a debt crisis.

However, shadow banking also fuels the rise in corporate debt and, consequently, increases the risk of systemic instabilities, thereby requiring additional regulatory interventions[547]. Indeed, attempts to clamp down on shadow banking have represented a constant feature of Government financial policies. Most notably, as of 2016, in the context of the so-called '*deleveraging campaign*'[548], Chinese authorities passed a number of regulations to increase the oversight of the banking system (in relation to banks and non-banks), notably with the aim to curtail shadow banking practices and, by extension, prevent the worst in terms of systemic risks. The deleveraging campaign entailed a series of monetary tightening measures, as well as introducing new regulatory policies over the course of 2017 and 2018, including the new asset management rules "*designed to curb shadow banking growth and limit banks'* [practices of] *placing funds with third-party asset managers and* [non-bank financial institutions]. *The new rules banned any implicit or explicit guarantees on WMPs or asset management products, which had been the foundation of the rapid growth in shadow banking channels from 2012 to 2016. Asset management products were not permitted to invest, directly or indirectly, via either debt or equity into industries or sectors that were targeted by government regulations and explicit credit restrictions, such as lending to property developers and* [local government financing vehicles]."[549] This regulatory effort resulted in some contraction in the most destabilizing shadow banking operations. However, recent expertise shows that the "*shadow banking sector has been able to avoid the newly introduced rules and continue growing*"[550]. According to the Financial Times, citing a China Beige Book International report, shadow financing picked up strongly in mid-2019, reaching lending shares unseen since at least 2013[551]. This is because, after the tightening of two years earlier, 2019 saw a relaxation on shadow banking operations in a selective manner[552]. As a result, a 2022 report by the European Central Bank summarized the state of the Chinese shadow banking sector as follows:

> *Although the rate of growth of shadow banking has slowed recently, the shadow banking sector remains particularly vulnerable to adverse shocks. Shadow banking* [...] *has expanded rapidly in recent years, reaching a share of about 60% of GDP* [...]. *Although macroprudential policies have curbed growth in the sector, levels remain near all-time highs, posing risks to the Chinese economy. China's shadow banking sector is mainly concentrated on activities that are highly vulnerable to changes in investor sentiment. These activities include certain types of investment*

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547 See Section 4 in Apostolou, A., Al-Harshimi, A., Ricci, M., *Financial risks in China's corporate sector: real estate and beyond*, ECB, 2022.

548 See Wright, L. – Grasping Shadows, p. 23 - 36.

549 *Ibid.*, p. 30.

550 Allen, F., Gu, X., *Shadow banking in China compared to other countries*, The Manchester School, June 2020, p. 4; available at: https://doi.org/10.1111/manc.12331 (accessed on 22 August 2023).

551 Weinland, D., *China's shadow banking industry roars back*, Financial Times, 25 September 2019; available at: https://www.ft.com/content/4c66b622-dea5-11e9-9743-db5a370481bc (accessed on 22 August 2023).

552 Bisio, V., *China's Banking Sector Risks and Implications for the United States*, Staff Research Report of the US-China Economic and Security Review Commission, 27 May 2020, p.8.

vehicles, such as wealth management products whose value amounts to around 25% of GDP.

Similarly, as noted by OECD in 2022, while shadow banking has been reigned in, to some extent, "[t]*hus far, no viable replacement of shadow banking has emerged*" and shadow banking keeps representing a source of potential systemic risks to the financial system[553].

In sum, shadow banking keeps constituting an important alternate source of finance for corporations, its importance being an indicator of the restraints and the tight control by the State of other parts of the financial system. At the same time, the shadow banking increases the risk of a systemic debt crisis, a reason for which it has been subject to various regulatory actions, in particular in the context of the deleveraging campaign initiated in 2016.

6.3.2. STATE CONTROL OVER THE BANKING SECTOR

6.3.2.1. CONTROL THROUGH PARTICIPATION

The State dominates the banking sector[554] by maintaining controlling stakes in all state-owned commercial banks, as well as by being the majority shareholder in a number of joint-stock commercial banks, either through direct investment by Central Huijin or indirectly through other state-owned legal entities. The state policy banks are 100% state-owned. The below overview (Table 6.2) provides a more detailed breakdown of the State participation in the main banking entities.

Table 6.2: State participation in main banking entities

Bank	***State shareholding (%)***
State-owned commercial banks[555]	
ICBC	66.1
CCB	59.2
ABC	85.2

553 See *OECD Economic Surveys: China 2022*, OECD Publishing, 2022, pp. 27, 29, 33-34; available at: https://www.oecd-ilibrary.org/docserver/b0e499cf-en.pdf (accessed on 22 August 2023).

554 See also Chorzempa, M. and Véron, N., *Will China's impending overhaul of its financial regulatory system make a difference?*, PIIE, March 2023, p. 2; available at: https://www.piie.com/sites/default/files/2023-03/pb23-1.pdf (accessed on 22 August 2023).

555 Information based on the respective 2021 annual reports: ICBC, Annual Report 2021; available at file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2022/2022-3/2022-03-31/7943541.PDF (accessed on 22 August 2023), ABC, Annual Report 2021; available at: https://www.abchina.com/en/investor-relations/performance-reports/annual-reports/202204/P020220427580795705015.pdf (accessed on 22 August 2023), BOC, Annual Report 2021; available at: https://pic.bankofchina.com/bocappd/report/202203/P020220329651388848178.pdf (accessed on 22 August 2023), CCB, Annual Report 2021; available at: www.ccb.com/cn/investor/20220329_1648566213/20220329225810029232.pdf (accessed on 22 August 2023), BOCOM, Annual Report 2021; available at: https://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2022/2022-3/2022-03-26/7917572.PDF (accessed on 22 August 2023), PSBC, Annual Report 2021; available at: https://www.psbc.com/en/investor_relations/finance/financial_reports/202204/P020220426371074627241.pdf (accessed on 22 August 2023).

BOC	64.6
PSBC	71.2
BOCOM	40.3
Joint-stock commercial banks[556]	
China Everbright Bank[557]	82.89
China CITIC Bank[558]	72.79
China Guangfa Bank[559]	95.71
China Bohai Bank[560]	50.55
Industrial Bank[561]	39.95
Shanghai Pudong Development Bank[562]	53.1
China Merchants Bank[563]	35.32
Huaxia Bank[564]	72.89
China Zheshang Bank[565]	16.5

556 Approximate percentage of shares owned by the State and state-owned corporations, based on the respective 2021 annual reports.

557 See China Everbright Bank, 2021 Semi-Annual Report; available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=601818&id=7512500 (accessed on 22 August 2023).

558 See China CITIC Bank, 2021 Annual Report; available at: https://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2022/2022-3/2022-03-25/7912624.PDF (accessed on 22 August 2023).

559 See China Guangfa Bank, Annual Report 2021; available at: http://www.cgbchina.com.cn/subsite/202204/25545741/2021ar.pdf (accessed on 22 August 2023).

560 See China Bohai Bank, Annual Report 2021; available at: www.cbhb.com.cn/bhbank/S101/attach/20210901001cn.pdf (accessed on 22 August 2023).

561 See ICBC, Annual Report 2021; available at: file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2021/2021-8/2021-08-27/7488935.PDF (accessed on 22 August 2023).

562 See Shanghai Pudong Development Bank, 2021 Semi-Annual Report; available at: https://static.sse.com.cn/disclosure/listedinfo/announcement/c/new/2021-08-28/600000_20210828_4_HEBMzsvE.pdf (accessed on 22 August 2023).

563 See China Merchants Bank, Annual Report 2022, p. 125; available at: https://pdf.dfcfw.com/pdf/H2_AN202303241584543269_1.pdf (accessed on 22 August 2023).

564 See Huaxia Bank, 2021 Annual Report, p. 102; at: https://www.hxb.com.cn/images/jrhx/tzzgx/xxpl/dqbg/2022/05/05/B362099429CC04D0C84E9B3045DF8B1F.pdf (accessed on 22 August 2023).

565 See China Zheshang Bank, Annual Report 2022, p. 102; available at: http://www.czbank.com/cn/investor/financial_info/reports/202204251/202204256/202304/P020230412631634382714.pdf (accessed on 22 August 2023).

Hengfeng Bank[566]	89.1
Ping An Bank[567]	7.84% Indirect state-ownership via the Ping An Group
China Minsheng Bank[568]	Less than 3%

6.3.2.2. CONTROL THROUGH BOARD COMPOSITION AND GOVERNMENTAL TIES

The control of the government over the largest banks does not only entail a mere holding of shares. According to the AoA of the state-owned commercial banks, the Government, in its capacity as the majority/controlling shareholder, has the power to appoint the most important positions within the management of the banks, such as the members of the Board of Directors and/or the Board of Supervisors. The same applies *mutatis mutandis* to the joint-stock commercial banks where the State holds stakes which allow it to decide on the composition of the management boards. These boards are usually responsible for taking decisions on the business strategy and the budget of the bank, taking investment decisions, deciding on senior management appointment or dismissals, and formulating the risk management system of the bank[569]. Senior managers of the state-owned commercial banks are usually members of the bank's Party committee[570].

In addition, in 2017, the role of Party organisations in the business activities of state-owned banks has been strengthened. In line with the ongoing changes of the regulatory requirements pertaining to the SOE sector (see Section 5.4), more than 30 Hong Kong-listed state-owned enterprises, representing more than USD 1 trillion in market capitalisation, have adjusted their AoA to grant the Party a stronger role[571].

To provide some examples, ICBC's AoA now contains a dedicated chapter on the creation of a Party committee[572]. According to this chapter, "*the chairman of the board of directors of the*

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566 See Evergrowing Bank, Annual Report 2022, p. 70; at: https://www.hfbank.com.cn/upload/attach/%E6%81%92%E4%B8%B0%E9%93%B6%E8%A1%8C%E8%82%A1%E4%BB%BD%E6%9C%89%E9%99%90%E5%85%AC%E5%8F%B82022%E5%B9%B4%E5%B9%B4%E5%BA%A6%E6%8A%A5%E5%91%8A.pdf (accessed on 22 August 2023).

567 See Ping An Bank, Homepage – Investor Relations – Major Shareholders; available at: https://group.pingan.com/investor_relations/major_shareholders.html (accessed on 22 August 2023).

568 See China Minsheng Bank, Annual Report 2022; available at: https://ir.cmbc.com.cn/media/mc3d2wm2/%E4%B8%AD%E5%9B%BD%E6%B0%91%E7%94%9F%E9%93%B6%E8%A1%8C2022%E5%B9%B4%E5%B9%B4%E5%BA%A6%E6%8A%A5%E5%91%8A.pdf, p. 94 (accessed on 22 August 2023).

569 See for instance Article 160 of the AoA of the ABC or Article 138 of the AoA of the ICBC.

570 See *Research Report on the Corporate Governance Practices of China's Big Six Commercial Banks*, Deloitte, 2019, p. 10; available at: https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/int-markets/lu-2019-corporate-governance-practices-china-big-six-commercial-banks.pdf (accessed on 22 August 2023). According to this report, describing in detail the so-called "*double entry, cross offices*" system, on average, more than 70% of the Party committee members of the Big Six Banks serve as senior management members.

571 Hughes, J., *China's Communist party writes itself into Company Law*, Financial Times, 14 August 2017; available at: https://www.ft.com/content/a4b28218-80db-11e7-94e2-c5b903247afd (accessed on 22 August 2023).

572 AoA of the ICBC, Chapter 6, Articles 52-53; available at: http://v.icbc.com.cn/userfiles/Resources/ICBCLTD/download/2017/gszc_en.pdf (accessed on 22 August 2023).

Bank and the secretary of the Party Committee shall be the same person"[573]. Article 53 then lists the duties of the Party committee, including the monitoring of the practical implementation of Party and State decisions in the bank. The Party committee is also playing a role in the selection and evaluation of personnel, together with the board of directors. Finally, the Party committee is to be involved in the discussion of "*major operational and management issues and major issues concerning employee interests and put forth comments and suggestions*"[574]. Changes have also been made to the provisions concerning the board of directors, stating that the Party committee has to be consulted before material issues are decided upon[575]. There appears to be ample evidence that through this process Party organisations have become the ultimate decision-maker within banks[576].

The AoA of the ABC contain identical language on establishing the Party committee in Article 58 and on the Committee's involvement in the discussion of major issues in Article 161[577]; the same is true for the AoA of PSBC in Articles 52 and 188[578].

Furthermore, the Board of Supervisors of the key state-owned financial institutions is appointed according to the Interim Regulation on the Board of Supervisors of Key State-owned Financial Institutions[579]. According to Articles 3 and 5 of the Interim Regulation, the Members of the Board of Supervisors of such financial institutions are dispatched by and accountable to the State Council. Key state-owned financial institutions are defined in Article 2 of the Interim Regulation according to which:

> *The key State-owned financial institutions mentioned in these Regulations refer to State-owned policy banks, commercial banks, financial assets management companies, securities companies, insurance companies, etc. (hereinafter referred to as State-owned financial institutions), to which the State Council dispatches boards of supervisors. The list of State-owned financial institutions to which the State Council dispatches boards of supervisors shall be recommended by the administrative organ for boards of supervisors in State-owned financial institutions (hereinafter referred to as the administrative organ for boards of supervisors) and submitted to the State Council for determination.*

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573 *Ibid.*, Article 52.

574 *Ibid.*, Article 53 (3).

575 *Ibid.*, Article 144.

576 "*In practice, proposals approved by the Party organisation after its research and discussion have rarely ever been vetoed by the board of directors. Both literature research and interviews indicate that the Party organization is the decision maker when it comes to major issues and it plays the most significant role in governance structure*". See *Research Report on the Corporate Governance Practices of China's Big Six Commercial Banks*, Deloitte, 2019, p. 9; available at: https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/int-markets/lu-2019-corporate-governance-practices-china-big-six-commercial-banks.pdf (accessed on 22 August 2023).

577 AoA of the ABC; available at: https://www.abchina.com/en/investor-relations/corporate-announcements/announcements/201811/W020181126632885896610.pdf (accessed on 22 August 2023).

578 AoA of the PSBC; available at: https://www.psbc.com/en/investor_relations/announcement/202012/P020201208621016895139.pdf (accessed on 22 August 2023).

579 Available at: http://www.pbc.gov.cn/english/130733/3858822/index.html (accessed on 22 August 2023).

The organisational setup of joint-stock commercial banks does not differ from the one of the state-owned commercial banks, thereby effectively allowing for Party control over all essential decision of the company. The AoA of China Everbright Bank serve as an example[580]. According to Article 52 "*the chairman of the board of directors of the Bank and the secretary of the Party Committee shall be the same person*" while Article 158 stipulates that "*prior to making decisions on material issues of the Bank, the Board of Directors shall hear the opinion from the Party Committee*". Virtually identical language can be found for example in Articles 64 and 171 of the AoA of the China CITIC Bank[581].

In view of the above, Party bodies can exert influence over personnel and business decisions in banks (and other entities in the financial sector), playing not only an important role in the appointment and dismissal of major personnel but also directly participating in decision-making on major operational matters. The abovementioned "*double entry, cross offices*" system, which occurs between Party committee, board of directors, board of supervisors and senior management, extends beyond of the chairman of the board of directors serving as the secretary of the Party committee and entails additional overlaps between the banks' management structures and the Party organisations, such as the chairman of the board of supervisors serving as the deputy secretary of the Party committee and the vice presidents of the banks serving as the Party committee members[582]. This practice and the subordination of the banks' decision-making to the Party's control and review is directly based on the instructions of the CBIRC: *"We shall improve the leadership system of 'double entry, cross offices'. Members of the Party joining the Boards of Directors, Boards of Supervisors and the senior management positions shall rigorously implement the decisions by the Party organisation"*[583]. More generally, one of overall aims of CBIRC's Notice 40 of August 2020, is openly declared as to *"further strengthen the Party's leadership in China's banking and insurance sectors"*[584].

The persisting and – in particular since 2017 – increasing influence of the CCP over management bodies and day-to-day operations of the main corporate entities within the banking sector perpetuates the historically known situation in which the highest executives of financial institutions all had political ranks similar to local and central government officials. For example, the political rank of the CEO of the BOC used to be the same level as that of the vice president

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580 AoA of China Everbright Bank; available at: https://vpr.hkma.gov.hk/statics/assets/doc/100314/ma/ma01_eng.pdf (accessed on 22 August 2023).

581 AoA of the China CITIC Bank; available at: https://www.citicbank.com/about/survey_1/regulation/202110/P020211012520900934734.pdf (accessed on 24 August 2023).

582 See *Research Report on the Corporate Governance Practices of China's Big Six Commercial Banks*, Deloitte, 2019, p. 9; available at: https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/int-markets/lu-2019-corporate-governance-practices-china-big-six-commercial-banks.pdf (accessed on 22 August 2023).

583 See *Three-year action plan for improving corporate governance of the banking and insurance sectors (2020-2022)*, Notice No 40, CBIRC, 28 August 2020. http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=925393&itemId=928 (accessed on 24 August 2023).

584 *Ibid.*

of the PBOC or a vice governor of a province[585]. Similarly, a 2015 analysis of the individual profile of the members of the board of directors of the top 10 banks revealed that most of the board of director's seats were assigned to professionals who are connected to the governmental apparatus[586]. They had either worked for governmental institutions, had political roles in cities or regions of China (i.e. mayor), or were members of the CCP. Research, conducted in 2023, of the members of the board of directors of the BOC and ICBC banks upheld the same conclusions[587].

6.3.3. Legal Framework Regulating the Banking Sector

In addition to the ownership and institutional control and influence of the State over the banks described above, Chinese financial institutions are also operating in a legal environment that directs them to align themselves with the country's industrial policy objectives when making financial decisions. This section provides a brief overview of the main legal instruments (for further details see also Chapter 2).

6.3.3.1. Banking Law

The objective of the Law of the PRC on Commercial Banks ('*Banking Law*')[588] is defined in its Article 1 as regulating the behaviour and interests of the banks, the interests of depositors and clients, the quality of the banks' assets, their supervision, as well as promoting the development of the socialist market economy.

In line with the last objective, Article 34 states that: "*Commercial banks shall conduct their business of lending in accordance with the needs of the national economic and social development and under the guidance of the industrial policies of the State*"[589]. Thus, the Banking Law directs banks to promote a lending strategy which supports the industrial policies of the State.

The room for manoeuvre of the banks is further constrained by Article 38, which determines that the range of interest rates which a commercial bank may charge in the course of its business can only fluctuate between the lower and upper limits set by the PBOC[590]. In the past, the PBOC indeed set minimum and maximum interest rates for loans and deposits via executive regulatory acts. Since October 2015, the PBOC has removed these limits[591]. However, Article 38 of the

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585 Elliott, D.J. and Yan, K., *The Chinese Financial System, An Introduction and Overview*, John L. Thornton China Center Monograph Series, Number 6, July 2013, p. 11; available at: https://www.brookings.edu/wp-content/uploads/2016/06/chinese-financial-system-elliott-yan.pdf (accessed on 24 August 2023).

586 The analysis has been restricted to the 20 major Chinese Banks mentioned in the Section 3.1.

587 Directors and Board of Directors of BOC; available at: https://www.bankofchina.com/en/investor/ir6/201504/t20150402_4830133.html (accessed on 12 October 2023); Board of Directors of ICBC; available at: https://www.icbc-ltd.com/icbcltd/corporate%20governance/board%20of%20directors/board%20of%20directors/ (accessed on 12 October 2023).

588 Law of the PRC on Commercial Banks, Order No. 34 of the President of the PRC, as amended.

589 *Ibid.*, Article 34.

590 *Ibid.*, Article 38.

591 With other types of regulatory guidance on limits for deposit and loan rates remaining in place. See, for example Cao, L., *Cutting Deposit Rates Has Become Mission Critical for Chinese Banks*, The Wall Street Journal, 17 May 2023; available at: https://www.wsj.com/articles/cutting-deposit-rates-has-become-mission-critical-for-chinese-banks-a17759ef (accessed on 24 August 2023).

Banking Law, which is the legal basis for the PBOC's regulatory acts, has not been adapted accordingly, so that such limits may again be imposed at any time by the PBOC. Furthermore, the PBOC requires commercial banks to express their loan prime rates quotations as a function of the monetary tools controlled by the PBOC[592] (see also Section 11.3).

Consequently, the PBOC and the State Council maintain a high degree of control over the operations of commercial banks, both with respect to selection of sectors to which credit will be primarily available (Article 34 of the Banking law), as well as regarding to the cost of financing (Article 38 of the Banking law).

The provisions of Articles 34 and 38 are somewhat softened by Article 7 concerning the examination of the creditworthiness of the borrower, and Article 4 relating to the bank's autonomy, and the fact that "*commercial banks shall, pursuant to law, conduct business operations without interference from any unit or individual*"[593]. However, this formulation does not shield banks from their duty to apply public policy considerations as set out in Article 34 of the Banking Law.

In October 2020, the PBOC published for consultation a draft amendment of the Banking Law, which concerns the risk tolerance levels, corporate governance, consumer rights protection, personal information handling, takeovers, capital adequacy, as well as bankruptcy procedures. Notably, the draft specifies conditions under which the State Council may opt to take over a bank the normal operations of which might be impeded[594]. As of writing of this Report, the legislative process has not been finalised[595].

6.3.3.2. RULES ON LOANS AND SUPPORT

In 1996, the PBOC promulgated the General Rules on Loans[596], the main purpose of which was to regulate the activities connected with loans, to protect the legitimate rights and interests of both parties to borrowing and lending, to ensure the safety of credit and loan assets, to improve the overall results from loan utilization, and to promote steady socio-economic development[597].

Article 7 of the General Rules on Loans states that: '*Special-purpose loan means a loan which is made by a fully-State-owned commercial bank with approval and authorization of the State Council and with necessary remedies having been taken in advance for any possible loan loss*'[598]. Additionally, Article 15 establishes that interest on loans may be subsidized when in

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592 For a wider context of the interest rates policies, see Adams, N., Jacobs, D., Kenny, S., Russell, S., Sutton, M., *China's Evolving Financial System and Its Global Importance*, Reserve Bank of Australia, 2021, pp. 5-6.

593 Law of the PRC on Commercial Banks, Order No. 34 of the President of the PRC, as amended, Article 4.

594 See *Chinese Central Bank Overhauls Commercial Banking Law*, China Banking News, 19 October 2020; at: https://www.chinabankingnews.com/2020/10/19/chinese-central-bank-overhauls-commercial-banking-law/ (accessed on 24 August 2023).

595 See *About the Amendment to the Banking Law*, NPC, 26 April 2022; available at: www.npc.gov.cn/npc/c30834/202204/2986d7f635ff4fe69c57e774b914faa1.shtml (accessed on 24 August 2023).

596 The General Rules on Loans promulgated by the PBOC on 28 June 1996.

597 Chapter 1, Article 1 of the General Rules on Loans promulgated by the PBOC on 28 June 1996.

598 *Ibid*., Chapter 2, Article 7. Special loans referred to in Article 7 had been eliminated in 1999 based on a Circular on Improving the Administration of Special Loans, but the Circular itself was annulled in 2007, leaving Article 7 in effect.

accordance with the State's policy to promote the growth of certain industries and economic areas[599].

The Government also intervenes into the lending operations of financial entities by designating industrial sectors which should benefit from privileged access to credit. In 2005, the State Council issued its Decision No. 40[600] (see Chapter 4). Article 17 thereof provides that investment projects in the '*Encouraged*' category shall benefit from specific privileges and incentives, inter alia, from financial support. By contrast, Articles 18 and 19 provide that the relevant authorities can prevent financial institutions from supplying loans to '*Restricted*' and '*Prohibited*' projects. In this respect, Decision No. 40 echoes in part Article 34 of the Banking Law by mandating that financial institutions should take into account industrial state policies when providing loans.

The prominent role of State policy considerations (instead of purely commercial ones) which the State imposes upon the commercial banks in shaping their lending strategies is also clearly visible in the MOF's Notice on the Commercial banks performance evaluation method issued on 15 December 2020. According to the notice's provisions, the performance evaluation criteria of commercial banks have now to, notably, take into account how entities "*serve the national development objectives and the real economy*", and in particular how they "*serve strategic and emerging industries*". Article 4 of the notice stipulates that "*the performance evaluation of commercial banks shall provide a strong and effective guarantee that national macro-policies will be implemented*"[601].

In sum, the lending policies of banking institutions are shaped to serve policy purposes and in which the banks' performance is – at least to some degree – superseded by compliance with the requirements to support the Government's industrial policies. This legal framework described above complements those industrial policies and ensures that whenever the Government identifies economic priorities, projects of national interests, specific industrial programs etc., requisite funds are channelled as a priority to these projects via the banks.

The industrial policy of little giants (see Section 2.3.2) provides but one of many possible examples which can demonstrate how the industrial and lending policies are intertwined. As mentioned in Section 2.3.2., the Guiding Opinions regulating the little giants initiative require the following with respect to financing: "*Involve various types of government guidance funds and encourage social capital to contribute to the establishment of high-quality enterprise incubator funds. Duly use existing funding channels to support the high-quality development of 'specialized and specific' small and medium-sized enterprises.*" As aptly concluded by independent sources[602]: "*It is likely that these firms can list on public markets and attract funding. But it is not because of the judgment of investors that these firms are viable or*

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599 *Ibid.*, Chapter 3, Article 15.

600 Decision of the State Council Regarding Promulgating the Implementation of Interim Provisions on the Promotion of Industrial Restructuring, 2 December 2005, Guo Fa [2005] No.40.

601 See the Notice on the Commercial banks performance evaluation method, issued on 15 December 2020 by MOF; at: http://jrs.mof.gov.cn/gongzuotongzhi/202101/t20210104_3638904.htm (accessed on 24 August 2023).

602 See Naughton, B. and Boland, B., *CCP Inc., The Reshaping of China's State Capitalist System*, A Report of the CSIS Freeman Chair in China Studies, CSIS, 2023, p. 19.

especially productive, but rather because they are known to have policymakers' imprimatur. It may be an astute short-run move to buy these stocks, but the purchaser will be looking to dump the shares once the policy-led bubble has peaked. The quality of the information coming from the stock market can only decline."

The systematic instrumentalization of the Chinese banking sector for the purposes of pursuing industrial policies is well documented also in the Commission's recent trade defence practice, such as in Regulation 2021/328[603]. In the corresponding investigation, the Commission established the Government's ownership and/or control, including control over the composition of management bodies, of all relevant banking institutions[604] in the categories described above in Sections 6.3.1.1, 6.3.1.2 and 6.3.1.3. Subsequently, having reviewed the relevant regulatory documents, including the Banking Law, the General Rules on Loans and the Decision No. 40 (see Section 4.2.9, the Commission concluded that "*financial institutions in the PRC operate in a general legal environment that directs them to align themselves with the GOC's industrial policy objectives when taking financial decisions*"[605].

6.4. SECURITIES SECTOR

6.4.1. GENERAL LEGAL FRAMEWORK

The Securities Law of the PRC[606] (*'Securities Law'*), regulates the issuance and trading of securities on Chinese exchange markets. According to Article 2 of the Securities Law, it applies *"to the issuance and transaction of stocks, corporate bonds, depository receipts and other securities lawfully recognized by the State Council within the territory of the People's Republic of China"*. Following its 2019 revision, the Securities Law provides a comprehensive legal framework, regulating the essential aspects of securities markets, such as the registration of new securities for initial public offerings, disclosure requirements, trading, investor protection, sanctions, or the extent of responsibility of the CSRC. The 2020 revision also resulted in the elimination of the explicit obligation of bond issuers to comply with the industrial policies of the State[607], as well as in the encouragement by the State for listings of corporate stocks complying with such industrial policies[608]. Nevertheless, Article 1 of the Securities Law, in setting out the law's overall purpose, claims allegiance to the concept of socialist market

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603 Commission Implementing Regulation (EU) 2021/328 of 24 February 2021 imposing a definitive countervailing duty on imports of continuous filament glass fibre products originating in the People's Republic of China following an expiry review pursuant to Article 18 of the Regulation (EU) 2016/1037 of the European Parliament and of the Council, OJ L 65, 25.02.2021, p. 1.

604 See *Ibid.*, recitals 71-72. That is XIM Bank, CDB, CCB, ICBC, BOCOM, China Everbright Bank, Postal Savings Bank, China Merchants Bank, Shanghai Pudong Development Bank, China Industrial Bank, Shenyang Rural Commercial Bank, Bank of Shanghai, Ningbo Bank, China CITIC Bank, China Guangfa Bank, China Bohai Bank, Huaxia Bank, Hankou Bank, Hubei Bank, Huishang Bank, Dongying Bank, Bank of Tianjin, Bank of Kunlun, Shanghai Rural Commercial Bank, China Industrial International Trust Limited, Daye Trust Co., Ltd., Sinotruk Finance Co., Ltd.

605 *Ibid.*, Recitals 74-75.

606 Available at: http://www.npc.gov.cn/englishnpc/c23934/202109/9886ca6f805e4663a9a725d6f72066dd.shtml (accessed on 24 August 2023).

607 Under previous Article 16(4) of the Securities Law.

608 Under previous Article 51 of the Securities Law.

economy (see Chapter 2), thereby confirming that the securities market continues to represent a tool for advancing the political and economic agenda pertaining to that doctrine:

> *This Law is enacted in order to standardize the issuance and transaction of securities, protect the legitimate rights and interests of investors, maintain the socioeconomic order and public interests of society and promote the development of the socialist market economy.*

Another noteworthy provision of the 2020 amendment of the Securities Law is Article 177 which stipulates that:

> *Overseas securities regulatory bodies may not directly conduct investigation and evidence collection activities within the territory of the People's Republic of China. In the absence of consent of the securities regulatory authority under the State Council and relevant competent departments under the State Council, no entity or individual may provide documents and material relating to securities business activities overseas without prior authorization.*

This Article, demonstrating the tight control which Chinese authorities intend to maintain over the functioning of the securities markets in China, should be seen in conjunction with one of the broader aims of the Securities Law's revision. As reported by CCP-backed media, the revision specifically targets overseas activity insofar as: "*any issue or trading of securities beyond China's borders that disrupts China's domestic market order or encroaches on the legitimate rights and interests of domestic investors shall be handled and investigated for liability*"[609].

More generally, the legal framework for the bond and the stock market, as established under the Securities Law, follows a logic that is similar to the legislation relating to bank loans, that is that bond and stock markets are eventually used for channelling capital to priority projects in line with the State's priorities. The more specific modalities of the State presence and interference on the securities markets are further developed in Sections 6.4.2 and 6.4.3 below.

6.4.2. BOND MARKET

6.4.2.1. STRUCTURE AND STATE PRESENCE ON THE BOND MARKET

The Chinese bond market has been growing rapidly and is, as of writing of this Report, the second largest globally. As of mid-2020, the Chinese onshore bond market was estimated worth USD 15.5 trillion - equivalent to the bond markets in the UK, France and Germany combined – and reaching some USD 17 trillion in 2021[610]. The largest segment of the bond market – some 55% – was represented by central government bonds, local government bonds and policy banks

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609 See *New Securities Law takes effect, targets overseas activity*, Global Times, 1 March 2020; available at: https://www.globaltimes.cn/content/1181185.shtml (accessed on 24 August 2023).

610 See *China Insights – Market structure*, The China Bond Team, 20 April 2021; available at: https://www.eurizonsljcapital.com/china-market-structure/ (accessed on 24 August 2023).

bonds[611]. Approximately one third of the market[612] was represented by credit bonds, i.e. mainly bonds issued by SOEs, privately owned corporations and financial institutions.

Table 6.3: Composition of the onshore bond market (2021)[613]:

Type of Bonds	%
Central Government and equivalent	16.83
Local Government	22.77
Policy Banks	15.84
Credit	34.65
Others	9.90

The significant proportion of bonds with limited credit risk issued by governments and policy banks represents a feature which distinguishes the Chinese bond market from its western counterparts dominated by corporate bonds. In other words, as is the case for the banking sector, government-related players play a major role in the Chinese bond market. Moreover, despite some regulatory developments improving their access to liquidity[614], privately owned companies still have constrained access to the onshore bond market, with most of the corporate bonds being issued by SOEs (in 2021, SOE bonds represented 92% of the outstanding corporate bonds value)[615]. The self-financing ability of the private sector therefore remains limited, as remains the overall importance of the bond markets within the Chinese financial system. The below 2022 chart prepared by the IMF demonstrates this in visual terms.

Figure 6.2: Contribution to Total Social Financing Stock Growth (in %, year-on-year)[616]

611 *9 Things to know about China's Bond Market*, Allianz Global Investors, 15 October 2021, p. 2; available at: https://ch.allianzgi.com/-/media/allianzgi/globalagi/china-microsite/9-things-to-know/9-things-to-know-about-chinas-bond-markets.pdf (accessed on 24 August 2023).

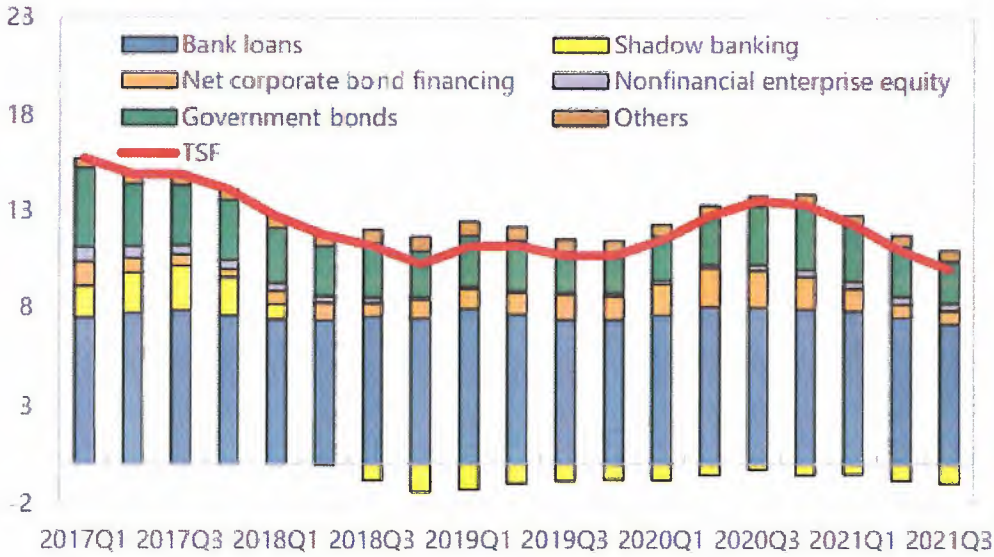
612 *The Internationalization of the China Corporate Bond Market*, International Capital Market Association (ICMA), Zurich, 2021, p. 7; available at: https://www.icmagroup.org/assets/documents/About-ICMA/APAC/The-Internationalization-of-the-China-Corporate-Bond-Market-January-2021-140121.pdf (accessed on 24 August 2023).

613 See *China Insights – Market structure*, The China Bond Team, 20 April 2021; available at: https://www.eurizonsljcapital.com/china-market-structure/ (accessed on 24 August 2023). The available figures shows that the structure of the Chinese bond market has largely remained unchanged since 2018. See in this connection Shen, W., *Conceptualizing the Regulatory Thicket: China's Financial Markets after the Global Financial Crisis*, Routledge, London, New York, 2021, p. 79. Original source is WIND and Golden Credit Rating.

614 See for example the 2021 Guiding Opinions on Promoting the High-quality Development of the Reform and Opening Up of the Corporate Credit Bond Market; available at: www.gov.cn/xinwen/2021-08/18/content_5631977.htm (accessed on 24 August 2023). See further *China Bond Monitor: SOE credit differentiation will intensify*, Moody's Investor Service, 20 May 2021, p. 4.

615 *Ibid.*, p. 3. Based on WIND data.

616 See *Consultation-Press Release; Staff Report; and Statement by the People's Republic of China: 2021 Article IV Executive Director for the People's Republic of China*, IMF, 2022, p. 53; available at: https://www.imf.org/en/Publications/CR/Issues/2022/01/26/Peoples-Republic-of-China-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-512248 (accessed on 22 August 2023).



In this connection, the IMF highlights the importance of the government bond issuances to maintain liquidity in an environment of tighter credit conditions and corresponding sluggish corporate bond issuance in 2021-2022[617]. Moreover, the investors' structure remains heavily dominated by banks, which are also the underwriters of most bonds - central government bonds, PBOC notes, policy bank bonds and bank subordinated debt[618]. Banks are also the largest holders of corporate bonds, followed by fund institutions[619]. Since there is a significant overlap between the creditors providing capital on the bond market and those providing capital in the form of loans, bonds are to a certain extent just another means to provide corporate loans.

In addition, international investors held less than 3% of the Chinese bond market in 2021. As the chart below illustrates, the very limited, even if growing presence of international investors in the Chinese bond market, confirms the lack of integration of the Chinese financial system into the global structures[620].

Figure 6.3: Foreign ownership of Chinese bonds (as of January 2021)[621]

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617 *Ibid.*

618 Shen, W., *Conceptualizing the Regulatory Thicket: China's Financial Markets after the Global Financial Crisis*, Routledge, London, New York, 2021, p. 74.

619 Amstad, M., and He, Zh., *Chinese Bond Market and Interbank Market*, NBER, Working Paper 25549, February 2019, p. 10; available at: https://www.nber.org/system/files/working_papers/w25549/w25549.pdf (accessed on 24 August 2023).

620 China has been taking certain measures to increase the access of international investors to the onshore bond market, such as Bond Connect; available at: https://www.chinabondconnect.com/en/About-Us/Company-Introduction.html (accessed on 24 August 2023).

621 *9 Things to know about China's Bond Market*, Allianz Global Investors, 15 October 2021, p. 3; available at: https://ch.allianzgi.com/-/media/allianzgi/globalagi/china-microsite/9-things-to-know/9-things-to-know-about-chinas-bond-markets.pdf (accessed on 24 August 2023). Original source: CEIC, Wind, Citi Research.

Furthermore, the market is still highly fragmented. It is dominated by the interbank market, sub-markets lack connectivity, featuring different trading systems, bond types and participants. The regulatory framework is also complex, featuring numerous regulatory authorities' (MOF, PBOC, NDRC, NFRA, CSRC, NAFMII[622]) responsibility for various components of the bond market (initial issuance, trading, custody), depending also on the type of bond in question[623]. It can also be noted that, while the Chinese corporate bond market has been on the rise in recent years, the increase seen in 2020 was linked notably to new State regulation on the issuance of special crisis-shielding bonds in support of SMEs, which at the same time involved regulatory pressure on State-owned banks to buy these bonds[624].

6.4.2.2. Credit Ratings and Pricing of Credit Risk on the Bond Market

Not only is China's bond market dominated by the State, as described in Section 6.4.2 above, the credit risk linked to the bonds issued is determined on a distorted basis. According to two studies published in 2016, China had close to a dozen domestic credit rating agencies, and in total, 60% of all rated corporate bonds in China had been rated by a state-owned ratings agency[625]. In addition, according to one of these studies, one of the largest domestic credit rating agencies in China, Dagong Global Credit Rating, was judged 'private' from the standpoint of

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622 NAFMII (National Association of Financial Market Institutional Investors) is a self-regulatory organization under the supervision of the PBOC. Its members include infrastructure institutions, financial intermediaries (lead underwriters, underwriters, credit rating agencies, guarantee companies), non-financial intermediaries (accounting firms, law firms, and asset appraisal companies), investor members, issuers, and others; available at: https://www.nafmii.org.cn/englishnew/aboutus/aboutnafmii/ (accessed on 24 August 2023).

623 See, for example, Livingston, M., Poon, W.P.H. and Zhou, L., *Are Chinese Credit Ratings Relevant? A Study of the Chinese Bond Market and Credit Rating Industry*, Journal of Banking & Finance, Volume 87, February 2018, pp. 216-232; available at: https://doi.org/10.1016/j.jbankfin.2017.09.020 (accessed on 24 August 2023).

624 *The Internationalization of the China Corporate Bond Market*, ICMA, Zurich, 2021, p. 8; available at: https://www.icmagroup.org/assets/documents/About-ICMA/APAC/The-Internationalization-of-the-China-Corporate-Bond-Market-January-2021-140121.pdf (accessed on 24 August 2023).

625 Lin, L.W. and Milhaupt, C.J., *Bonded to the State: A Network Perspective on China's Corporate Debt Market*, Columbia Law and Economics Working Paper No.543, p. 20; available at: https://commons.allard.ubc.ca/cgi/viewcontent.cgi?article=1206&context=fac_pubs (accessed on 24 August 2023); Livingston, M., Poon, W.P.H. and Zhou, L., *Are Chinese Credit Ratings Relevant? A Study of the Chinese Bond Market and Credit Rating Industry*, Journal of Banking & Finance, Volume 87, February 2018, pp. 216-232; available at: https://doi.org/10.1016/j.jbankfin.2017.09.020 (accessed on 24 August 2023).

equity ownership but had its origins in the Government and was led by a politically well-connected controlling shareholder whose business model was closely aligned with the policy objectives of the Government[626]. In 2019, further to a ruling concerning the lack of due diligence and conflicts of interest, the company was ultimately taken over by an SOE – the China Reform Holdings[627]. Notably, in 2019, among the nine domestic rating agencies that remained, five were at least partly state-owned[628]. Foreign rating agencies, such as Standard and Poor's and Fitch are present on the Chinese market, after obtaining licenses to rate bonds traded in the interbank market. While, as of the beginning of 2021, their local subsidiaries had issued some ratings in relation to the local market, the latter remained aligned with the domestic rating pattern described in the next paragraph[629].

In general, the Chinese credit ratings are heavily skewed towards the highest end of the rating scale. By the end of 2020, 96% of Chinese bonds were rated 'AA' or better, with 38% of credit bonds carrying an 'AAA' rating[630], while, for example, less than 10% of firms enjoy such top-notch ratings in the US market[631] (see also Figure 6.4 below). Consequently, the information on credit risk estimation of the underlying asset that can be derived from a rating by Chinese credit rating is not directly comparable to the ratings in other markets, such as the EU or the US. Market operators may still be able to discern informational content in the ratings provided by Chinese rating agencies and efficiently react on that basis[632], taking into account that the majority of "*variations in Chinese bond ratings can be explained by* [...] *commonly used financial ratios and market-based variables, such as an issuer's market capitalization, interest coverage ratio and total debt ratio*"[633]. Nevertheless, despite a correlation between the bond ratings and the corresponding bond yielas, the fundamentals of the Chinese bond ratings do not correspond to those by international credit rating agencies in various respects: (i) Chinese credit rating agencies have very broad rating scales and tend to pool bonds with significantly different

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626 Lin, L.W. and Milhaupt, C.J., *Bonded to the State: A Network Perspective on China's Corporate Debt Market*, Columbia Law and Economics Working Paper No.543, p. 20; available at: https://commons.allard.ubc.ca/cgi/viewcontent.cgi?article=1206&context=fac_pubs (accessed on 24 August 2023).

627 See Hornby, L., *China's Dagong rating agency taken over by state-owned investor,* Financial Times, 19 April 2019; available at: https://www.ft.com/content/7079c7aa-6265-11e9-b285-3acd5d43599e (accessed on 24 August 2023).

628 See Jaquet, K., *Understanding China's Bond Ratings*, The Diplomat, 27 June 2019; available at: https://thediplomat.com/2019/06/understanding-chinas-bond-ratings/ (accessed on 24 August 2023).

629 *The Internationalization of the China Corporate Bond Market*, ICMA, Zurich, 2021, p. 18; available at: https://www.icmagroup.org/assets/documents/About-ICMA/APAC/The-Internationalization-of-the-China-Corporate-Bond-Market-January-2021-140121.pdf (accessed on 24 August 2023).

630 *Ibid.* See further *9 Things to know about China's Bond Market*, Allianz Global Investors, 15 October 2021, p. 3; available at: https://ch.allianzgi.com/-/media/allianzgi/globalagi/china-microsite/9-things-to-know/9-things-to-know-about-chinas-bond-markets.pdf (accessed on 24 August 2023).

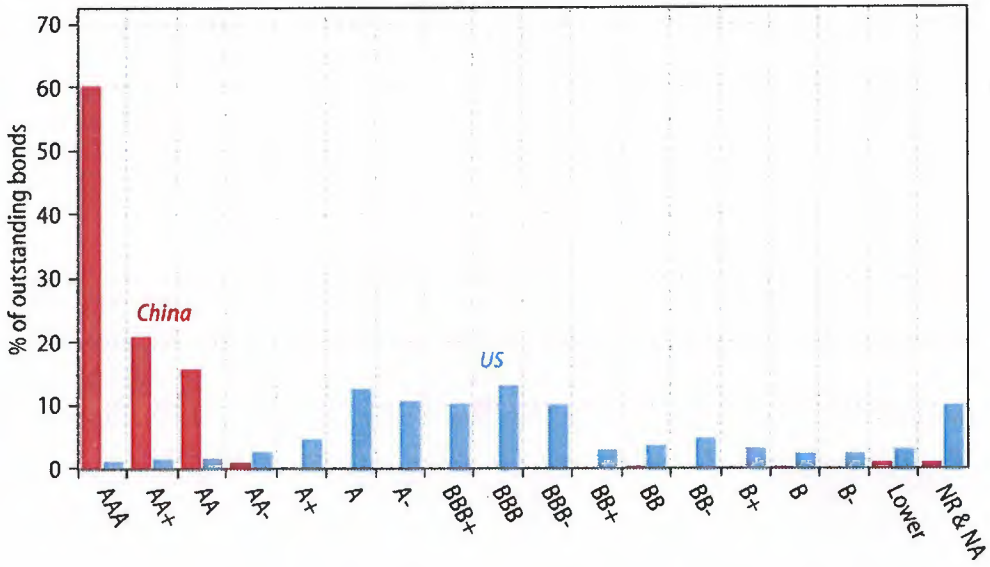
631 Livingston, M., Poon, W.P.H. and Zhou, L., *Are Chinese Credit Ratings Relevant? A Study of the Chinese Bond Market and Credit Rating Industry*, Journal of Banking & Finance, Volume 87, February 2018, pp. 216-232; available at: https://doi.org/10.1016/j.jbankfin.2017.09.020 (accessed on 24 August 2023).

632 See Poon, W.P.H.; Chan, K.C. – An empirical examinationn of the informationnal content of credit ratings in China (2008), Journal of Business Research; available at: https://www.sciencedirect.com/science/article/pii/S0148296307002561 (accessed on 12 March 2024)

633 See Livingstone, M.; Poon, W.P.H.; Zhou, L. – Are Chinese credit ratings relevant? A study of the Chinese bond and credit rating industry, p. 216-217; (2018), Journal of Banking and Finance; available at: https://www.sciencedirect.com/science/article/pii/S0378426617302352 (accessed on 12 March 2024).

default risks into a single rating category, with one-notch difference in Chinese ratings likely to be equivalent to a one-letter (or three-notch) difference in international ratings, (ii) yields on non-SOE bonds are typically higher than bonds issued by SOEs, the perceived implicit government guarantee of the SOE being the likely cause, (iii) rating standards appear to vary significantly among Chinese credit rating agencies[634].

Figure 6.4: Share of corporate bond by rating, China vs US, as of March 2021[635]



These characteristics of the Chinese credit rating system can be attributed to several factors. First, the relatively high number of rating agencies allow borrowers to choose whichever rating agency can give them a higher rating. This, in combination with the requirement for bonds to be rated before issuance, resulted in *"vicious cycle in which only high-rated bonds can be sold, and only high credit ratings are given. As a result, credit ratings have little real meaning"*[636]. Even if China has nominally taken a number of steps to correct the deficiencies in the credit-rating market[637], the OECD pointed out in 2023 that "[d]*eficiencies in the credit-rating market, including inflated ratings and weak warning systems hinder the healthy development of the bond market*"[638].

Second, the strong State presence on the Chinese bond market has historically led to a situation where bond defaults have hardly existed. The market has been largely confined to the largest

634 *Ibid.*, p. 217, 226, 230-1.

635 See Zhang, X., *Time to Fix Credit Ratings*, Gavekal Dragonomics, 17 March 2021, p. 2.

636 *Ibid.*, p. 1.

637 In February 2021, the CSRC finalised amendments to the administrative rules of credit rating business in the securities market and for issuance and trading of corporate bonds, which removed the requirement of mandatory credit rating for issuing public corporate bonds, with only issuer rating required. In March 2021, the PBOC issued on 28 March 2021 a draft decision promoting high-quality and healthy development of credit ratings in the bond market, according to which credit rating agencies could be held accountable as independent third parties. Regulations seeking to restrict access of high-risk issuers to the corporate bond market were also published in 2021. See *OECD Economic Surveys: China 2022*, OECD Publishing, 2022, pp. 34-35; available at: https://www.oecd-ilibrary.org/docserver/b0e499cf-en.pdf (accessed on 22 August 2023).

638 *Ibid.*, p. 34.

and most politically connected firms, for which default risk has long been considered to be essentially non-existent[639], with important implications for functioning of the market: "[s]*ince the highest-rated firms have an implicit sovereign guarantee, it is difficult for firms without one to achieve the same rating. The existence of implicit guarantees for SOEs therefore has the effect of systematically pushing down the ratings private firms can achieve, which in turn limits their access to the bond market*"[640]. In fact, the first default on bonds only occurred in 2014 (see also Section 6.7). Since then, bond defaults remained occasional until 2018, when their numbers slightly increased, notably due to the tightening of rules on non-standard financing. A specialised survey indicated notably that the market *"tend to remain static, and a credit can easily go straight from AA status to default."* In the same survey, interviewees acknowledged that credit ratings in China were not internationally comparable as *"a critical development in the internationalization of the* [Chinese] *onshore market will be the introduction of internationally comparable credit ratings"*[641].

In 2019, another study confirmed the paradoxical decoupling of the Chinese domestic ratings from the dynamics of companies' real financial condition: "*Since the first default in 2014 until 2018, there were about ten times more upgrades than downgrades* [...]. *Of the 2,784 bond issuers 918 received rating upgrades, only 129 were downgraded and the vast majority of 1737 remained the same rating level over the past four years until end of 2018*"[642].

In 2020, the defaulting bond values further went up, this time with several SOE bonds defaulting. It is to be noted here that these companies were mostly local SOEs in what appeared as fiscally troubled localities. However, importantly, the three bonds to default in the end of 2020 (Huachen Automotive, Yongcheng Coal and Electricity, Tsinghua Unigroup) were rated 'AAA'. Further high-profile defaults followed in 2021 and 2022, in particular in the property sector (the companies Sunac China Holdings, Evergrande, Sinic Holdings, China Properties Group, Fantasia, Kaisa can be mentioned as examples[643]).

These defaults prompted regulatory action - in particular the abolishment of the requirement for corporate bonds to obtain a credit rating - but they also highlighted the ongoing structural problems related to risk assessment of corporate debt in China, notably *(i)* a drive by the credit agencies to expand their market share rather than to provide a realistic rating of the bond issuer,

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639 Lin, L.W. and Milhaupt, C.J., *Bonded to the State: A Network Perspective on China's Corporate Debt Market*, Columbia Law and Economics Working Paper No.543, p. 35; available at: https://commons.allard.ubc.ca/cgi/viewcontent.cgi?article=1206&context=fac_pubs (accessed on 24 August 2023).

640 See Zhang, X., *Time to Fix Credit Ratings*, Gavekal Dragonomics, 17 March 2021, p. 3.

641 *The Internationalization of the China Corporate Bond Market*, ICMA, Zurich, 2021, p. 18; available at: https://www.icmagroup.org/assets/documents/About-ICMA/APAC/The-Internationalization-of-the-China-Corporate-Bond-Market-January-2021-140121.pdf (accessed on 24 August 2023).

642 Amstad, M., and He, Zh., *Chinese Bond Market and Interbank Market*, NBER, Working Paper 25549, February 2019, p. 30; available at: https://www.nber.org/system/files/working_papers/w25549/w25549.pdf (accessed on 24 August 2023).

643 See for instance *Evergrande, Kaisa cut by Fitch to default after missed payment deadlines,* Reuters, 9 December 2021 available at: https://www.reuters.com/business/chinas-kaisa-kicks-off-12-bln-debt-restructuring-after-missing-pay-date-source-2021-12-09/ (accessed on 25 August 2023) or *China Properties defaults on notes worth $226 million*, Reuters, 15 October 2021; available at: https://www.reuters.com/article/china-properties-bonds-idUSL4N2RB335 (accessed on 25 August 2023).

leading to inflated ratings, *(ii)* a regulatory environment discouraging credit rating agencies from downgrading bonds and therefore resulting in poor early warning capabilities ahead of defaults, *(iii)* persistent assumption of an implicit government guarantee[644] originating in the high share of SOEs among bond issuers and past government interventions[645]. According to a 2021 report: "*Recent SOE defaults expose a deeper issue: price and other critical signals failing to reflect market realities, despite the decades-old official mantra of 'market-oriented reform* [...] *Validating SOEs' credentials, state support, explicit or tacit, distorts market signals. Beijing's ever more muscular state capitalism is at the root of market disillusion over SOE creditworthiness*"[646]. This sentiment was shared by the IMF which noted in 2022: "*After a series of defaults by local SOEs, the government has focused on improving supervision. However, limited progress has been made in core reform areas such as removing implicit guarantees or tightening budget constraints of SOEs*"[647].

In sum, the Chinese credit rating system cannot be considered as being driven by market forces, with significant adjustments necessary in terms of market conduct by credit rating agencies, as well as regulatory steps by the Chinese authorities. Without such changes, the credibility of the Chinese credit rating regime will remain limited, failing to provide accurate information (and protection) to investors and potentially contributing to market imbalances, rather than preventing them.

6.4.3. STOCK MARKET

As of 2021, China was the country with the second largest stock market capitalisation, after the US[648]. There are two main stock exchanges in China, the Shanghai Stock Exchange ('*SHSE*') and Shenzhen Stock Exchange ('*SZSE*'), which were both established in 1990. Some other stock markets have been established to complement the two main exchanges. For example, an electronically operated market for SMEs was opened in 2001, and a 'third-tier market' was established to deal primarily with de-listing firms and other Over-the-counter transactions ('*OTC transactions*'). In 2009, a growth enterprise market ('*GEM*') was established for companies from hi-tech, electronic and pharmaceutical industries[649] and in 2019 the Shanghai Stock Exchange Science and Technology Innovation Board ('*STAR*')[650] began operations. The

644 See He, W., *Eroding the Implicit Guarantee*, Gavekal Dragonomics, 1 December 2020.

645 See for instance *Credit ratings in China: pushing a narrative built in wonderland*, Asia Power Watch, 16 June 2022; available at: https://asiapowerwatch.com/credit-ratings-in-china-pushing-a-narrative-built-in-wonderland/ (accessed on 25 August 2023).

646 *The myth of SOE creditworthiness*, China Policy, 18 June 2021; available at: https://mailchi.mp/policycn/cpsignal-2753776?e=523ec61747 (accessed on 25 August 2023).

647 See *Consultation-Press Release; Staff Report; and Statement by the People's Republic of China: 2021 Article IV Executive Director for the People's Republic of China*, IMF, 2022, p. 35; available at: https://www.imf.org/en/Publications/CR/Issues/2022/01/26/Peoples-Republic-of-China-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-512248 (accessed on 22 August 2023).

648 See for instance *Stock market capitalization, 2020 Country rankings*; available at: https://www.theglobaleconomy.com/rankings/stock_market_capitalization_dollars/ (accessed on 25 August 2023).

649 Allen, F., Qian, Q.J., Zhang, C. and Zhao, M., *China's financial system: opportunities and challenges*, NBER, Working paper 17828, February 2012, p. 25; available at: https://www.nber.org/system/files/working_papers/w17828/w17828.pdf (accessed on 24 August 2023).

650 See Overview of the STAR; available at: http://star.sse.com.cn/en/gettingstarted/overview/ (accessed on 25 August 2023).

scale and importance of these stock markets are not comparable to the banking sector, although they have grown rapidly in recent years, and many sources cite SHSE as the 3rd largest stock exchange globally in terms of market capitalisation[651] as of writing of this Report.

Another major stock exchange trading China-based company is located in Hong Kong. The Hong Kong Stock Exchange ('*HKSE*') is trading a considerable volume of so-called H-shares, which are shares of Chinese firms which have gained permission to sell stock in Hong Kong to attract foreign capital. The following types of shares also exist on the Chinese stock markets: A-shares (issued in RMB) are traded by Chinese investors and are difficult to purchase for foreign investors[652], whereas B-shares, quoted in foreign currencies, may be purchased by foreign investors. In addition, SOEs listed on a Chinese stock exchange also have so-called government or G-shares, typically with restrictions on their tradability (see below).

In fact, many companies on the stock exchange are SOEs. As of June 2022, nine out of the top ten firms listed on the SHSE accounting for more than one fifth of total market capitalization are SOEs (see Table 6.4):

Table 6.4: Top 10 listed companies in SHSE[653]

No	Name	Total market value (billion yuan)	Ownership
1	Kweichow Moutai	2 763	SOE
2	Industrial and Commercial Bank of China	1 399	SOE
3	China Merchants Bank	1 164	SOE
4	Agricultural Bank of China	1 069	SOE
5	Ping An China	761	SOE
6	PetroChina	791	SOE
7	Bank of China	659	SOE
8	China Life Insurance	740	SOE
9	China Yangtze Power	529	SOE
10	Haitian Flavouring & Food	483	private

The picture is different with regard to the SZSE, where most of the top 10 listed companies feature private majority stakes, except for the second largest company (Wuliangye)[654]. SZSE is however more technology-oriented and has a lower capitalisation than SHSE.

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651 See also the Overview of SHSE; available at: http://english.sse.com.cn/aboutsse/overview/ (accessed on 25 August 2023).

652 While foreign investors are able to invest in A-shares, a 20% limit per month exists on the repatriation of related funds to foreign countries.

653 Based on the SHSE data.

654 Based on the Shenzhen Stock Exchange data.

The capital structure of these SOEs originally included tradable and non-tradable shares. In 2005, CSRC initiated a plan to fully float non-tradable shares which were largely owned by the Government, and practically all the shares have become tradable during the 2010s[655]. However, the State still retains a firm hold on many listed companies by directly or indirectly holding shares.

In more general terms, China's stock exchanges do not have their origin in selling shares in private companies, and there is still an overall lack of private listings[656]. Furthermore, in addition to many of the firms listed on the stock exchanges being state-owned, and to restrictions on a majority of the shares issued (since they are either non-tradable or not accessible to foreign investors), the access to the Chinese stock market is heavily regulated by the State. In contrast to other countries, initial public offerings ('*IPOs*') do not simply need to be registered; they need to be approved by CSRC (see Articles 11-13 of the Securities Law). The administrative control over the IPO procedure is thus high. Before 1999, share offerings were subject to a quota system. Although explicit quotas do not apply anymore, and have been replaced by an approval system, CSRC still applies implicit quotas for different districts and different industries[657]. Indeed, the CSRC is acknowledged to be using its approval prerogative to give preference to specific industries or areas, and in this manner to steer the allocation of capital in line with the State interest, as the approval process concerns also shares numbers and the capital raised in an IPO[658].

Intervention of the CSRC goes also as far as regulating the IPO pricing by setting binding IPO Price-to-Earnings (P/E) ratios, despite the lack of express rules on that matter. This limitation has been considered as preventing efficient pricing and leading to undervaluation of initial stock prices (and hence many speculative movements). One consequence of this is disincentivising long-run investments in IPO stocks, and thus also the lack of motivation to assess the companies' real fundamentals. This, together with the long timeframes to obtain the CSRC's approval, has rendered raising capital through the stock market in China particularly complex and costly[659]. While sub-markets such as STAR (within SHSE), and ChiNext (within SZSE) have adopted recently a registration-based system with regard to IPOs (with no P/E requirement notably), the latter approach still constitutes largely a pilot endeavour.

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655 Administrative Measure of Share Segmentation Reform of Listed Companies, CSRC, 4 September 2005, Zheng Jian Fa [2005] No. 86. See also *Dividend pay-out policies in the pre and post-split share structure reform in China*, 19 May 2021, p. 12; available at: https://www.tandfonline.com/doi/epdf/10.1080/23322039.2021.1923620 (accessed on 25 August 2023).

656 Shen, W., *Conceptualizing the Regulatory Thicket: China's Financial Markets after the Global Financial Crisis*, Routledge, London, New York, 2021, p. 85.

657 Elliott, D.J. and Yan, K., *The Chinese Financial System, An Introduction and Overview*, John L. Thornton China Center Monograph Series, Number 6, July 2013, p. 24; available at: https://www.brookings.edu/wp-content/uploads/2016/06/chinese-financial-system-elliott-yan.pdf (accessed on 24 August 2023).

658 Qian, Y., Ritter, J.R., Shao, X., *Initial Public Offerings Chinese Style*, January 2023, p. 6; available at: https://site.warrington.ufl.edu/ritter/files/IPO-Chinese-style.pdf (accessed on 25 August 2023).

659 *Ibid.*, pp. 8, 31.

What is more, developments occurring in 2021 suggest that the State has definitely kept its controlling prerogatives over IPOs and has in fact been tightening certain rules[660]. Not only did authorities halt the would-be largest ever IPO (Ant Group) for reasons which appeared to be beyond economic considerations[661], but media also reported of specific guidelines[662] for regulating the STAR market in a way that would give preference to companies active in hardware production while denying the possibility to go public to 'fintech' companies in another attempt to channel capital into industries that are key for the State.

One further precondition for an efficient securities market is the existence of reasonable protections for investors. The formal legal system of investor rights, i.e. the investors' rights to vote, to sell shares (thus facilitating a change in control) and to start legal proceedings in China appears at first sight in many respects similar to shareholders' rights in western systems.

However, voting rights are restricted by the fact that in the majority of cases, block holders own controlling stakes. In SOEs, the controller is typically State affiliated; in the listed firms that are not SOEs, the controller is an individual, family or affiliated groups of investors[663]. In the case of listed SOEs, which play a major role in the Chinese stock exchange, the relationship between the State as controlling shareholder and the minority shareholders renders corporate governance means, as well as recourse and enforcement ineffective[664].

As for the right to sue, Chinese courts have been authorized to treat claims of director wrongdoing in so-called 'derivative' lawsuits[665] since a 2006 amendment of the Company Law (see Article 151 of the Company Law). However, for relatively small investors, the costs of such a lawsuit would be prohibitive, unless there was a mechanism to allow these costs to be shared among all other shares. Yet neither the statutory law nor judicial innovation allows such cost sharing. Thus, the few derivative cases that are found in modern Chinese law tend to be cases involving JVs, where the plaintiff necessarily owns a large proportionate share of the firm. Thus, despite the fact that formally Chinese law has adopted the investor initiated derivative suit, courts are not in fact a realistic source of constraint on management misbehaviour in Chinese listed companies (see also Section 3.2.2)[666].

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660 See for example McMorrow, R. and Yu, S., China to tighten rules for tech companies seeking foreign funding (2021), Financial Times; available at: https://www.ft.com/content/7689489c-cdad-4596-a7c6-0774ed68bf5a (accessed on 29 August 2023).

661 See Wei, L., *China Blocked Jack Ma's Ant IPO After Investigation Revealed Likely Beneficiaries*, 16 February 2021, The Wall Street Journal; available at: https://www.wsj.com/articles/china-blocked-jack-mas-ant-ipo-after-an-investigation-revealed-who-stood-to-gain-11613491292 (accessed on 29 August 2023).

662 See Decision on Amending the Guidelines for the Evaluation of Science and Technology Innovation Attributes, No. 48, CSRC, 30 December 2022; available at: http://www.csrc.gov.cn/csrc/c101954/c6940776/content.shtml (accessed on 29 August 2023).

663 Allen, W.T., Shen, H., *Assessing China's top-down securities markets*, NBER, Working Paper 16713, January 2011, p. 27; available at: https://www.nber.org/system/files/working_papers/w16713/w16713.pdf (accessed on 29 August 2023).

664 Shen, W., *Conceptualizing the Regulatory Thicket: China's Financial Markets after the Global Financial Crisis*, Routledge, London, New York, 2021, p. 86.

665 That is a suit brought by a shareholder in the name and for the benefit of the corporation itself.

666 Allen, W.T., Shen, H., *Assessing China's top-down securities markets*, NBER, Working Paper 16713, January 2011, p. 34; available at: https://www.nber.org/system/files/working_papers/w16713/w16713.pdf (accessed on 29 August 2023).

This general weakness of shareholder rights discourages fundamental investment strategies. Since they cannot influence business choices, dividend levels, or investment decisions, shareholders rely less on the underlying firm value and focus more on speculative aspects of the stock price. Indeed, the Chinese stock market is at times rather speculative in nature and thus characterized by periods of relatively high volatility. In the recent past, there have been several periods of rapid expansion, followed by sudden crashes: e.g. before the financial crisis of 2008, between 2014 and 2015, as well as during the COVID-19 pandemic or 2020-2022 in the course of which the Chinese stock markets showed a complex pattern of short- and long-term volatilities as functions of the disease developments and public health measures responses, in combination with the financial stimulus provided by the Chinese authorities[667]. These volatilities illustrate that the market has difficulties in pricing securities adequately.

As a result, Chinese stock markets have until today not been effective in allocating resources in the economy. It is currently widely acknowledged by market experts that there is no correlation between economic fundamentals or profitability and the performance of the Chinese stock market. Rather, the latter constitutes a reflection and is a result of the particular nature of the whole Chinese economy[668]. This is clearly demonstrated when analysing the Hang Seng China A-H Premium Index. This index tracks the average price difference between A-shares and H-shares for the largest and most liquid China enterprises with both A-share and H-share listings. As these shares have the same voting and cash flow rights, they should follow each other closely[669]. Instead, the historical index shows substantial premiums for Chinese-traded A-shares in comparison with identical shares on the HKSE (see Figure 6.5 below). Even though a number of factors, such as the information asymmetry, demand differential or the risk preferences of different pools of investors[670], may contribute to the persistent A-share premium, the degree of differential raises the question of what can be considered a good indication of the fundamental value of the shares or the firms listed on the stock exchange.

Figure 6.5: Evolution of premiums for shares traded on Chinese stock exchanges in comparison with identical shares traded on the HKSE (2018-2023)[671]

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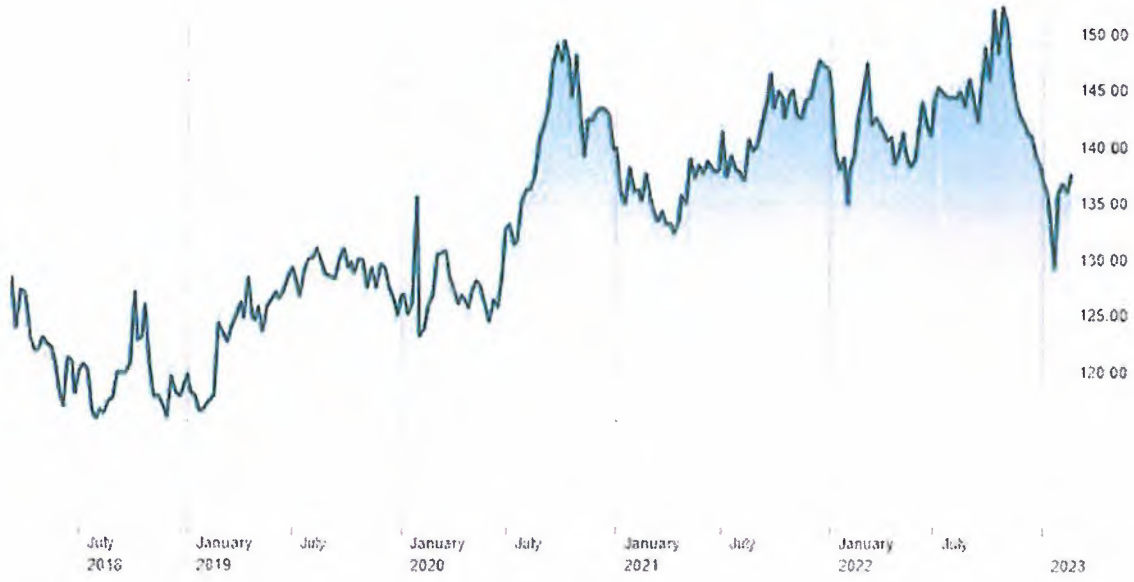
667 See for instance Jin, C., *Impact of the COVID-19 Pandemic on China's Stock Market Volatility, During and After the Outbreak: Evidence From an ARDL Approach*, Front Public Health, 18 May 2022; available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9159152/ (accessed on 29 August 2023). See further Feng, R., *China's Covid Easing Fuels Stock – Market Hopes – and Fans Fears*, The Wall Street Journal, 6 December 2022; available at: https://www.wsj.com/articles/chinas-covid-easing-fuels-stock-market-hopesand-fans-fears-11670322335 (accessed on 29 August 2023).

668 See notably Pettis, M., *Fundamentals simply do not matter in China's stock markets*, Financial Times, 13 January 2020; available at: https://www.ft.com/content/2362a9a0-3479-11ea-a6d3-9a26f8c3cba4 (accessed on 29 August 2023). See also Shen, W., *Conceptualizing the Regulatory Thicket: China's Financial Markets after the Global Financial Crisis*, Routledge, London, New York, 2021, pp. 84-85.

669 Allen, W.T., Shen, H., *Assessing China's top-down securities markets*, NBER, Working Paper 16713, January 2011, p. 10; available at: https://www.nber.org/system/files/working_papers/w16713/w16713.pdf (accessed on 29 August 2023).

670 See Wei, Z.; Haifeng, L.; Shuang, C. – Does the Shanghai-Hong Kong stock connect policy reduce China's A-H share price premium?, Applied Economic Letters (2022); available at: https://www.tandfonline.com/doi/abs/10.1080/13504851.2021.1937489 (accessed on 12 March 2024).

671 Available at: https://markets.ft.com/data/indices/tearsheet/summary?s=HSCAHPI:HKG (accessed on 29 August 2023).



In the above chart, 100 means that a Chinese A-share equals 100% of a Hong Kong H-share. Any figure below 100 means that the shares were traded at lower prices in mainland China than in Hong Kong; any figure above 100 means that the shares were traded at higher prices in mainland China than in Hong Kong. One can therefore see that prices in mainland China were usually higher for the same shares.

6.5. INVESTMENT FUNDS, GOVERNMENT GUIDANCE FUNDS

6.5.1. INTRODUCTION

China's private equity market has grown significantly, from around 3 500 private equity funds in existence in 2010 with total assets of around RMB 900 billion (of which 70% was funded from overseas)[672], to more than 31 549 private equity funds in 2022 with a total investment scale exceeding RMB 10 trillion[673].

Around 2014[674], the Government started to enter the private equity market by establishing targeted investment funds, the GGFs (see Chapter 5). Their purpose is to raise money from public and private sources and to make investments consistent with government priorities, whether related to industry policies – such as to channel investment to SEIs with the idea of technological upgrading and development – or motivated more by administrative and fiscal discipline – such as to clean up local governments' finances[675]. GGFs exist at all levels of government - central, provincial and local. Every government agency that sets up a GGF also determines its initial parameters, such as the allocated capital and the fundraising target. By

672 Elliott, D.J. and Yan, K., *The Chinese Financial System, An Introduction and Overview*, John L. Thornton China Center Monograph Series, Number 6, July 2013, p. 30; available at: https://www.brookings.edu/wp-content/uploads/2016/06/chinese-financial-system-elliott-yan.pdf (accessed on 24 August 2023).

673 See Zhu, S., *Private equity investment in China growing despite challenges*, SHINE News, 12 December 2022; available at: https://www.shine.cn/biz/economy/2212123935/ (accessed on 29 August 2023).

674 *Ibid.*, p. 5.

675 See Noble, L., *Paying for Industrial Policy*, Gavekal Dragonomics, 4 December 2018, p. 5-6.

mid-2018, 1 171 GGFs had a fund-raising target of RMB 5.85 trillion[676]. By 2021, China had set up more than 1 800 GGFs with a target size of RMB 10.18 trillion[677]. In most cases, these targets have not been met as only 480 GGF had reached their target size. The fundraising gap of the remaining GGF is estimated at RMB 6 trillion. These funds are concentrated in the Eastern and Northern parts of the country[678]. GGFs have been used in a number of sectors, essentially in the IT, biotechnology, machine manufacturing and electronics and optoelectronics [679], coinciding with China's industry policy priorities.

6.5.2. General Legal Framework

The functioning of the GGFs is governed by a number of legal instruments, among which the following (central level government) regulations provide an overview of the essential regulatory tools and their development over time:

- The 2008 Guiding Opinions of the NDRC, MOF and MOFCOM on the standardized establishment and operations of venture capital guidance funds, approved by the State Council, set out the nature of the funds. Their stated purpose is *"to give full play to the leverage amplification effect of fiscal funds, increase the supply of venture capital, and overcome the market failure of allocating venture capital purely through the market. In particular, by encouraging venture capital enterprises to invest in early-stage enterprises such as seed stage and start-up stage,* [they] *will make up for the shortcomings of general venture capital."* Following the principle of "*government guidance, market operations, scientific decision-making, risk prevention*", the GGFs are, according to the guiding opinions, to guide private capital towards sectors and enterprises so as to "*effectively combine government policy intentions with the operation of venture capital enterprises according to market principles*" [680].
- The 2015 MOF's Interim management measures applicable to government investment funds reiterated the "*government guidance, market operations, scientific decision-making, risk prevention*" principle and provided more details on the final objectives pursued, explicitly setting out that the funds shall "*support industry transformation, upgrade and development.* [...They] *shall support the industrialisation of major key technologies, guide social capital to increase investments, effectively solve the problems of large investments and high risks in industry development, achieve the industrial transformations, upgrades and major progress,*

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676 See *The government guidance funds*, Economic Daily, 13 August 2018, available at: http://static.jingjiribao.cn/static/jjrbrss/8/723676152401602050/139145.html (accessed on 29 August 2023).

677 See Yifan Wei, Yuen Yuen Ang, Nan Jia, *The Promise and Pitfalls of Government Guidance Funds*, Forthcoming at The China Quarterly, 17 September 2022; available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4200771 (accessed on 29 August 2023).

678 See 2022 Special Research Report on Government Guidance Fund; available at: https://finance.sina.com.cn/tech/roll/2023-01-18/doc-imyaqraq5633107.shtml (accessed on 29 August 2023).

679 See *Government Guidance Funds, development and impact*, SHSE report, March 2019, p. 16; available at: http://www.sse.com.cn/aboutus/research/report/c/4743535.pdf (accessed on 29 August 2023).

680 See Sections I and III of the Guiding Opinion on the standardized establishment and operations of venture capital guidance funds, 18 October 2008; available at: http://www.mofcom.gov.cn/aarticle/b/g/200812/20081205924175.html (accessed on 29 August 2023).

and promote the economic structural adjustment and optimization of resource allocations so as to implement the national industry policies"[681].

- The 2015 MOF's Guiding Opinion on injections of fiscal funds into governmental investment funds to support the industry development specified that "*venture capital guidance funds can be used to emerging industries to strengthen the integration of capital, technology and market*"[682].
- The growing role of governmental investment funds was further enshrined in the 13th FYP for the science and innovation development, namely as part of the strategy concerning business creation and innovation. Some of the GGFs were explicitly expected to help China reach its 2020 development targets[683].
- The Made in China 2025 strategy (see Chapter 4) explicitly mentions guidance investment funds as a tool to strengthen four industrial basic capacities, i.e. key components, advanced basic techniques, key materials and basic industrial technologies[684].
- The 2018 State Council Implementing Opinion on Fostering the Pilot Reform of State-owned Capital Investment Enterprises and State-owned Capital Operation Enterprises confirmed that state-owned capital investment and operations enterprises[685] are expected to "*focus on priority industries, key sectors,* [...] *focus on the structural adjustment of the state-owned economy,* [...] *better serve the national strategic needs* [...] *foster state-owned back-bone enterprises having innovation capacity and international competitiveness*"[686].
- In October 2019, the NDRC, PBOC, MOF, CBIRC, CSRC and SAFE issued a notice applicable to GGFs, notably requiring that their "*investments comply with national macro-management policies such as industry and investment policies*"[687].
- Finally, the 14th FYP foresees a further strengthening of GGFs[688].

6.5.3. Nature and Market Impact of the GGFs

As the language of the abovementioned legal instruments implies, GGFs seem intent to reconcile two contradictory policy objectives: support market-based operations on the one hand, and governmental policy guidance on the other. Several analytical reports have, however, shown that the policy guidance largely outweighs the market-based operation principle. For instance, the SHSE Capital Market Research institute concluded that "*currently, the*

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681 See Article 7 of the Interim management measures applicable to government investment funds, MOF, 2015; available at: http://www.gov.cn/gongbao/content/2016/content_5051233.htm (accessed on 29 August 2023).

682 See Section II.2 of the Guiding Opinion on injections of fiscal funds into governmental investment funds to support the industry development, MOF, 2015; available at: http://czt.sc.gov.cn/scczt/c102406/2017/12/29/1b80263ba2a141739cd73bc62cbb8977.shtml (accessed on 29 August 2023).

683 See Section XIX.2 of the 13th FYP for the science and innovation development; available at: http://www.gov.cn/gongbao/content/2016/content_5103134.htm (accessed on 29 August 2023).

684 See Made in China 2025 strategy; available at: https://www.gov.cn/zhengce/zhengceku/2015-05/19/content_9784.htm (accessed on 29 August 2023).

685 GGFs qualify as state-owned capital operations.

686 See Implementing Opinion on Fostering the Pilot Reform of State-owned Capital Investment Enterprises and State-owned Capital Operation Enterprises, 14 July 2018, Guo Fa [2018] No. 23; available at: http://www.gov.cn/zhengce/content/2018-07/30/content_5310497.htm (accessed on 29 August 2023).

687 Available at: http://www.gov.cn/xinwen/2019-10/26/content_5445159.htm (accessed on 29 August 2023)

688 See Section II.5.3 of the 14th FYP.

government guidance funds still lack an effective performance evaluation system. Government guidance fund itself [is] *non-profit-seeking, and the evaluation of the government guidance fund cannot be based solely on the return of funds and other profits*"[689]. It also pointed out that in breach of existing legal requirements[690], some local governments maintain an implicit guarantee on the funds they set up[691]. Similarly, and indeed already in 2016, the China National Audit Office pointed out that the "*market-orientation of sampled governmental funds is falling short of expectations*"[692].

Irrespective of whether the lack of market orientation can be considered the main reason, GGFs have a mixed record in achieving their proclaimed goals - in particular leveraging private capital – and they display signs of redundancy, inefficiency and poor management[693]. However, already in view of the sheer size of the government agencies' contributions to the GGFs, these funds represent an important tool to channel support to strategic industries or other priority projects chosen by the government authorities[694] and they are distortionary[695]. For example, as the Government pushed for more innovation in '*core technologies*', the volume of investments made by GGFs into the semiconductor sector increased by more than 800% (by USD 7.4 billion in absolute terms) between 2018 and 2020[696]. More generally, it has been observed that GGFs "*typically make equity investments in unlisted companies and start-ups in targeted sectors* [which makes] *getting a full picture of their total investment volumes, including what the funds are buying and at what price* [..] *difficult*"[697]. In any event, in view of such large size of investment flows relative to market size[698], GGFs strengthen the government control over resource allocation similarly to the role played by SOEs (see Section 5.4), sometimes as a direct

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689 See *Government Guidance Funds, development and impact*, SHSE report, March 2019, p. 8; available at: http://www.sse.com.cn/aboutus/research/report/c/4743535.pdf (accessed 29 August 2023).

690 See *The Anniversary of Hidden Debt Document No. 27*, 17 August 2019; available at: https://m.21jingji.com/article/20190817/5568ce8242d30032e203b30fd030b2e8.html (accessed 14 April 2023).

691 *Government Guidance Funds, development and impact*, SHSE report, March 2019, p. 23; available at: http://www.sse.com.cn/aboutus/research/report/c/4743535.pdf (accessed 29 August 2023).

692 See Report on Central Budget Implementation and Other Fiscal Revenues and Expenditures in 2016, 23 June 2017; available at: http://www.audit.gov.cn/n5/n26/c96986/content.html (accessed on 29 August 2023).

693 See Luong, N., Arnold, Z., Murphy, B., *Understanding Chinese Government Guidance Funds*, CSET, March 2021, pp. 14-17; available at: https://cset.georgetown.edu/wp-content/uploads/CSET-Understanding-Chinese-Government-Guidance-Funds.pdf (accessed 29 August 2023); Noble, L., *Paying for Industrial Policy*, Gavekal Dragonomics, 4 December 2018, p. 6-7.

694 See Sun, Y., *China Technology Funds Battle to Hit Profit Targets*, Financial times, 9 June 2021; available at: https://www.ft.com/content/5f6d7ffb-575e-4532-9a4b-1658317d84a2 (accessed on 29 August 2023).

695 See DiPippo, G., Mazzocco, I., Kennedy, S., p. 17.

696 During the same period, the number of registered companies in the sector increased by 52%. Arterburn, J., *Party Capital - a Blueprint for National Security Due Diligence on China*, C4ADS, 2021, p. 12. and fn. 36; available at: https://c4ads.org/wp-content/uploads/2022/03/PartyCapitalReport.pdf (accessed on 3 December 2021).

697 See DiPippo, G., Mazzocco, I., Kennedy, S., p. 17.

698 *Ibid.*

extension of the SOE policies, for instance when SOEs themselves participate in and/or manage the GGFs[699] or when GGFs invest in SOEs[700].

6.6. EXPORT CREDIT INSURANCE MARKET

The China Export & Credit Insurance Corporation (commonly known as Sinosure) is an SOE specializing in export credit insurance, in particular to cover the export of high-value added goods from China. It has a quasi-monopoly in export credit insurance[701]. Another state-owned enterprise, PICC, was granted a license to underwrite such risks in 2013, however, it focuses solely on short term export credit insurance[702].

Sinosure started operations in 2001[703]. According to its website, it is *"a state-funded and policy-oriented insurance company established and supported by the state to promote China's foreign economic and trade development and cooperation.* [...] *Taking 'performing policy functions and serving open economy' as its own responsibility, SINOSURE effectively serves for national strategies, accurately supports the development of enterprises and ensures financial sustainability. The company actively expands its coverage of export credit insurance and plays an irreplaceable role in supporting the construction of the Belt and Road Initiative (BRI), promoting a steady and quality growth of foreign trade, cultivating new edges for international economic cooperation and competition, and accelerating the optimization of economic structure.* [...] *SINOSURE, a policy-oriented financial institution established to meet the demands of economic globalization and the development of China's foreign economy and trade, will closely focus on the goal of serving the national strategies"*[704].

Sinosure is wholly owned by the State, and the Government exercises full ownership and financial control over it – MOF owns 26.4% of the stake, while 73.6% is owned by Central

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699 See for example the China Structural Reform Fund being managed by the state-owned China Chengtong Holdings Group Ltd., *The structural adjustment fund has become an important driving force for the reform of state-owned enterprises*, 21 September 2017; available at: http://www.sasac.gov.cn/n2588025/n2588139/c7895224/content.html (accessed on 29 August 2023) or *The Shareholding of the China Central Enterprises' Innovation and Investment Guidance Fund consisting almost entirely of state-owned enterprises*; available at: https://www.most.gov.cn/kjbgz/201705/t20170519_132869.html (accessed on 8 September 2023).

700 Luong, N., Arnold, Z., Murphy, B., *Understanding Chinese Government Guidance Funds*, CSET, March 2021, p. 22; available at: https://cset.georgetown.edu/wp-content/uploads/CSET-Understanding-Chinese-Government-Guidance-Funds.pdf (accessed 29 August 2023); Noble, L., *Paying for Industrial Policy*, Gavekal Dragonomics, 4 December 2018, pp. 6, 10, 14.

701 See for example *The credit insurance market in China*, 23 December 2019; available at: https://daxueconsulting.com/credit-insurance-market-in-china/ (accessed on 29 August 2023).

702 See at PICC website; available at: https://www.cpic.com.cn/market/c/2017-06-16/1199498.shtml (accessed on 29 August 2023).

703 See in particular the Notice on establishing the China Export & Credit Insurance Corporation, 23 May 2001; available at: www.elinklaw.com/zsglmobile/lawView.aspx?id=37788 (accessed on 29 August 2023).

704 See Sinosure's Corporate Profile at its website: https://www.sinosure.com.cn/en/Sinosure/Profile/index.shtml (accessed on 29 August 2023).

Huijin[705]. The AoA[706] state that "*the competent business department of the company is the Ministry of Finance*" and also require the company to submit financial and accounting reports and the fiscal budget report to MOF for examination and approval[707]. Sinosure's dependence on the State and reliance of the latter's support is reflected in the assessments of the company's (higher) credit ratings[708].

All of the supervisors on Sinosure's Board of Supervisors are appointed by the State Council and execute their duties according to the Interim Regulation on the Board of Supervisors of Important State-owned Financial Institution[709]. The senior management of Sinosure is also appointed by the Government. The company's website shows that the Chairman of Sinosure is the Secretary of the Party Committee of Sinosure, and that members of the senior management hold also functions in Sinosure's Party Committee. Moreover, the head of the discipline inspection and supervision team of the Central Commission for Discipline Inspection and the State Supervision Commission stationed in the company is also member of Sinosure' senior management[710].

Sinosure appears as a direct instrument of the State in fulfilling the latter's policies. Commercial considerations do not seem to play a major role in the company's operations. As reported by the media, one of the company's employees stated: "*We're fulfilling our role as a policy insurer, not a for-profit commercial institution*". Accordingly, in 2018, Sinosure's insured amount rose by 16.7% (to USD 612 billion) and claimed pay-outs by 41% (to some USD 2 billion) due notably to US-China trade tensions, the premium income increased by 6% only[711]. The corresponding figures for 2021 amounted to USD 682 billion (insured amount) and USD 1.9 billion (pay-outs) respectively.

The continued role of Sinosure as a platform for supporting Government policies remains unchanged, as apparent from a joint 2022 call by MOFCOM and Sinosure to "*support to enterprises to deepen traditional export destinations and tap diversified markets, with a focus*

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705 See *Fitch Affirms Sinosure's 'A+' IFS Rating; Outlook Stable*, Fitch Ratings, 11 April 2022; available at: https://www.fitchratings.com/research/insurance/fitch-affirms-sinosure-a-ifs-rating-outlook-stable-11-04-2022 (accessed on 29 August 2023).

706 Sinosure's AoA were approved by the State Council and issued as a part of the Circular of the State Council on the Establishment of Sinosure. See for example the Notice on establishing the China Export & Credit Insurance Corporation, 23 May 2001; available at: http://www.shaanxi.gov.cn/zfxxgk/zfgb/2001/d17q_4408/200806/t20080626_1642793.html (accessed on 29 August 2023).

707 Council Implementing Regulation (EU) No 1239/2013 of 2 December 2013 imposing a definitive countervailing duty on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the PRC (OJ L 325, 5.12.2013, p. 66), recital 228.

708 See *Fitch Affirms Sinosure's 'A+' IFS Rating; Outlook Stable*, Fitch Ratings, 11 April 2022 (accessed on 29 August 2023).

709 Available at: https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MTBkNGU4YzEzZGI%3D (accessed on 29 August 2023).

710 See Sinosure's Senior Management at its website: https://www.sinosure.com.cn/en/Sinosure/Management/index.shtml (accessed on 29 August 2023).

711 See Leng, C., Shen, S., Tham, E., *As trade war deepens, a state-owned insurer in China helps soften the blow*, Reuters, 12 September 2019; available at: https://www.reuters.com/article/us-usa-trade-china-insurers-idUSKCN1VX0L3 (accessed on 29 August 2023).

on providing credit insurance services for exports to countries along the Belt and Road, emerging markets, and free-trade zone partners'[712].

The 2021 annual report of Sinosure further confirms the influence of the State and CCP ideology as "*SINOSURE resolutely implements the decisions and requirements of the state,* [...], *supporting jointly building of the Belt and Road Initiative* [...], *making every effort to promote the stability and quality of foreign trade*"[713]. Moreover, "[f]*ull and strict Party governance was exercised with the responsibility of the Company in Party governance articulated and reinforced, and the plan to tighten up supervision on leaders and senior management at all levels set out and put into action. The inspection of the Central Leading Group for Inspection Work on SINOSURE concluded with full cooperation of the Company along the way*"[714] and "*SINOSURE integrated the Party's leadership into all aspects of corporate governance, optimized the authorization system, and tightened up supervision and restriction over exercise of power, thereby further improving the corporate governance*"[715].

Significant in this respect is that China is not a signatory to the Arrangement on Officially Supported Export Credits[716], that, amongst other things, prescribes a range of Commercial Interest Reference Rates within which most OECD-based export credit agencies are permitted to lend. As Sinosure is not bound by this arrangement, it is able to provide insurance premiums at highly competitive rates compared with its OECD counterparts[717]. As a result of the State support and interference described above, export credit insurance in China is thus offered on more favourable terms to Chinese companies and at the same time distorted towards State policy goals.

6.7. BANKRUPTCY PROCEDURES

6.7.1. GENERAL LEGAL FRAMEWORK

China's first bankruptcy law, passed in 1986, concerned only SOEs and had little impact in practice. China's corporate bankruptcy law was revised in 2006, with the present Enterprise Bankruptcy Law of the PRC ('Bankruptcy Law') [718] effective since 2007. The Bankruptcy Law applies to enterprises with a legal person status, including financial institutions[719], as well as other organizations falling under liquidation procedures[720]. Thus, the Bankruptcy Law applies

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712 See *China boosts support for export credit insurance*, Xinhua, 23 February 2022; available at: http://english.www.gov.cn/statecouncil/ministries/202202/23/content_WS62162bddc6d09c94e48a5627.html (accessed on 29 August 2023).

713 Sinosure *Annual Report 2021,* p. 2; available at: https://www.sinosure.com.cn/images/xwzx/ndbd/2022/07/01/614A436D74F31027D0FF4290DBC964F8.pdf (accessed on 29 August 2023).

714 *Ibid.,* p. 8.

715 *Ibid.,* p. 55.

716 The full text of the Arrangement on Officially Supported Export Credits is available at: https://one.oecd.org/document/TAD/PG(2022)1/en/pdf (accessed on 29 August 2023).

717 See for Dawar, K. (2020). *Official Export Credit Support: Competition and Compliance Issues*. Journal of World Trade 54, no. 3 (2020), p. 373–396 (accessed on 29 August 2017).

718 The Bankruptcy Law of the PRC, Order of the President of the PRC nr. 54, 27 August 2006.

719 According to Article 134 of the Bankruptcy Law, 'financial institutions' entail commercial banks, securities companies, insurance companies or any other financial institution.

720 Articles 2, 134 and 135 of the Bankruptcy Law.

to all companies, SOEs and private alike (except partnerships and sole proprietorships[721]). The Bankruptcy Law provides for detailed procedural rules, setting out the conditions which trigger the bankruptcy proceedings, the role of the relevant entities – like the administrator or the creditors' committee – or the outcome of the process[722].

However, it is important to mention that in the case of financial institutions only the relevant financial supervisory/regulatory authority may file for their bankruptcy (see Section 6.7.2.); if a financial institution is considered insolvent, the financial regulatory authority under the State Council can formulate the measures to carry out liquidation[723]. To be noted that in 2021, the State Council announced a review of the enterprise bankruptcy law planned for 2022, including the provisions applicable to for financial institutions. As of writing of this report, the revision process was still ongoing[724].

The provisions of the Bankruptcy Law are often the subject of interpretation and secondary rule-setting by the SPC. For instance, the SPC[725] issued the 2018 Minutes of the National Court Work Conference on Bankruptcy Trials that contain a special proceeding called substantive consolidation[726] which have been the object of various procedural approaches by courts and administrators[727]. As another example of interpretative action, the SPC issued in March 2019 the *Provisions of the Supreme People's Court on Several Issues Concerning the Application of the Enterprise Bankruptcy Law of the People's Republic of China (III)*[728], which clarify how companies should pay off debts after a bankruptcy application is accepted, what are creditors' rights in declaring claims, how administrators should deal with claims etc. Furthermore, the COVID-19 pandemic led to several changes of the bankruptcy-related rules and guidelines[729].

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721 For details see CSRC's website at http://www.csrc.gov.cn/ (accessed on 28 March 2023).

722 These procedural rules are described in more detail in Section 6.9.1 of the 2017 version of this Report.

723 The Bankruptcy Law, Article 134.

724 *China to put financial institution bankruptcy laws on legislative agenda,* Reuters, 8 March 2021; available at: https://www.reuters.com/article/us-china-parliament-bankruptcy-idUSKBN2B00YU (accessed on 29 August 2023). See also *The revised draft of the Enterprise Bankruptcy Law has been written*, 15 November 2022; available at: http://www.npc.gov.cn/npc/c30834/202211/fc9b2eb1a512487da4f1daf68a623c78.shtml (accessed on 29 August 2023).

725 *Notice of the Supreme People's Court on Issuing the Minutes of the National Court Work Conference on Bankruptcy Trials*, Law info China. (n.d.); available at: http://gongbao.court.gov.cn/Details/2ee4b89e25f895a91885e746d361a0.html (accessed on 8 September 2023).

726 In substantive consolidation, the assets of the consolidated affiliates are deemed as a single estate, the debts and claims between the consolidated affiliates are extinguished, and creditors of the consolidated affiliates will participate and receive payments through one bankruptcy proceeding. That is, assets and liabilities of the consolidated affiliates will be combined into a single pool, which will be arranged as a whole in the bankruptcy proceeding to achieve fair compensation to all creditors.

727 Bangwei, X., and Gongcheng, Z., *Main modes to initiate substantive consolidation bankruptcy*, China Business Law Journal, 21 October 2019; available at: https://law.asia/consolidation-bankruptcy/ (accessed on 29 August 2023).

728 *Provisions of the Supreme People's Court on Several Issues Concerning the Application of the Enterprise Bankruptcy Law of the People's Republic of China (III)*, Supreme Court of China, 28 March 2019, amended 23 December 2020; available at : http://gongbao.court.gov.cn/Details/2767d0164e52411e47607e2d32c437.html (accessed on 8 September 2023).

729 Austin, D. A., Yu, H., *Bankruptcy in the time of COVID-19: Special measures adopted by the People's*

The SPC published, in May 2020, guidelines regarding trial of civil cases during the epidemic period[730]. These guidelines encourage courts to actively guide negotiations between debtors and creditors to find solutions outside of the court system, such as the extension of the repayment period[731]. The SPC also published eight typical cases[732], guiding lower courts in their judgments, pointing towards economic continuity and social stability as a priority during the Covid-19 crisis[733], thereby further showing a continued influence and control of the State, through the encouragement of debt workout, restructuring techniques and out-of-court settlement[734]. The SPC guidelines are applied by lower-level courts, such as in the case of the *Ruling on Xia Wei and Zhang Zhanzu's Application for Liquidation Bankruptcy Filed Against Guangzhou Laitai Pharmaceutical Co., Ltd.* where the Guangdong Higher People's Court referred to the Supreme Courts guidelines in order to deny the liquidation application against Guangzhou Laitai Pharmaceutical Co., Ltd[735].

In terms of organisational set-up, the SPC instructed in 2016 intermediate people's courts located in provincial capital cities and vice-provincial cities to create liquidation and bankruptcy tribunals within respective courts[736]. Until December 2017, 97 specialized courts had been established[737]. In 2019, *ad hoc* bankruptcy courts were put into place in major cities (Shenzhen, Beijing, Shanghai, Tianjin, Guangzhou, Wenzhou, Zhejiang, Chongqing, and Nanjing)[738] showing a more local approach to bankruptcy, albeit operating under the influence of local governments.

6.7.2. Implementation of the Legal Framework

In many formal aspects, the current Bankruptcy Law is similar to bankruptcy laws in Western countries. It leads to either liquidation or reorganisation, and it relies on the intervention of the

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Republic of China courts during the period of COVID-19 prevention and control, International Insolvency Review, 2021; available at : https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8652823/ (accessed on 29 August 2023).

730 *Guiding Opinions of the Supreme People's Court on Several Issues Concerning the Proper Trial of Civil Cases Related to the Novel Coronavirus Epidemic in accordance with the Law*. Supreme Court of China. (2019, May 15); available at: https://www.court.gov.cn/fabu-xiangqing-230181.html (accessed on 28 March 2023).

731 Austin, D. A., Yu, H., *Bankruptcy in the time of COVID-19: Special measures adopted by the People's Republic of China courts during the period of COVID-19 prevention and control*, International Insolvency Review, 2021, p. 1; available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8652823/ (accessed on 29 August 2023).

732 Zhang, Y., Godwin, A., & Steele, S., *China's Covid-19 Response: The Role of Bankruptcy Law and 'Typical' Cases*, Australian Journal of Asian Law, 2022, Vol 22 No 2, p. 99; available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4062602 (accessed on 29 August 2023).

733 *Ibid.*, pp. 100, 109, 112.

734 *Ibid.*, p. 100.

735 Austin, D. A., Yu, H., *Bankruptcy in the time of COVID-19: Special measures adopted by the People's Republic of China courts during the period of COVID-19 prevention and control*, International Insolvency Review, 2021, p. 7; available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8652823/ (accessed on 29 August 2023).

736 Zhang, Y., Godwin, A., and Steele, S., *China's Covid-19 Response: The Role of Bankruptcy Law and 'Typical' Cases*, Australian Journal of Asian Law, 2022, Vol 22 No 2, p. 101; available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4062602 (accessed on 29 August 2023).

737 Li, B., Ponticelli, J., *Going Bankrupt in China*, Review of Finance, Volume 26, Issue 3, May 2022, p. 456; available at: https://academic.oup.com/rof/article/26/3/449/6355599 (accessed on 29 August 2023).

738 Ibid, p. 457.

court, as well as of an administrator, who manages the assets of the debtor after the court has accepted the bankruptcy filing[739]. Moreover, the Bankruptcy Law states that the administrators should be independent professionals[740]. Likewise, creditors are by law normally able to decide the outcome of the insolvency process.

Despite this, the number of insolvency cases has been low for an economy of the size of China[741]. During the years following the entry into force of the Bankruptcy Law, they have been on a downward trend until 2013[742] despite worsening economic conditions. In 2015 and 2016, the numbers of accepted bankruptcy filings reached 3 568 and 5 665, respectively[743]. In 2019 and 2020, respectively, 11 826 and 11 999 businesses applied for bankruptcy, which lowered considerably to 8 691 cases in 2021, pointing towards a strong effort to avoid insolvencies[744]. In any event, in comparison to these figures, for example, courts in France registered 51 145 insolvencies in 2019, 31 217 in 2020, 27 609 in 2021 and 41 249 in 2022[745], while statistics for Germany reveal 18 749 business bankruptcies in 2019, 15 840 in 2020 and 13 993 cases in 2021[746].

Moreover, the increase since 2015 of bankruptcy cases in China appears to be to a large extent the result of insolvencies of smaller companies – since 2014, the share in bankruptcy cases concerning companies of more than 500 employees appears in constant decline, while that share has been on a steady rise particularly for companies employing less than 100 people[747].

In addition, although 2020 has seen a number of SOEs defaults (see Section 5.5.1), SOEs bankruptcies continue to be significantly less numerous than private companies' failures[748]. This might be attributable to a broader State approach towards SOE bankruptcies consisting of guiding any insolvency proceeding towards a merger or reorganisation rather than liquidation.

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739 The Bankruptcy Law, Article 13.

740 The Bankruptcy Law, Article 24.

741 Jiang Y., *The curious case of inactive bankruptcy practice in China: A Comparative Study of U.S. and Chinese Bankruptcy Law*, Northwestern Journal of International Law & Business, 2014, vol. 34, issue 3, p. 561. See also Maliszewski, W., et al., *Resolving China's corporate debt problem*, IMF Working Paper WP/16/203, 2016.

742 *Ramping up China's bankruptcy courts, the latest data,* Supreme People's Court Monitor, 18 May 2016; available at: https://supremepeoplescourtmonitor.com/2016/05/18/ramping-up-chinas-bankruptcy-courts-the-latest-data/ (accessed on 29 August 2023).

743 *Chinese Leaders Back Bankruptcies for Unwanted Zombie Firms*, Bloomberg, 13 March 2017, updated 14 March 2017; available at: https://www.bloomberg.com/news/articles/2017-03-13/chinese-leaders-back-bankruptcies-for-unwanted-zombie-companies (accessed on 29 August 2023).

744 *Global Insolvency Report – Growing risks and uneven state support*, Allianz Research, 18 May 2022; available at: https://www.allianz-trade.com/content/dam/onemarketing/aztrade/allianz-trade_com/en_gl/erd/publications/pdf/2022_05_18_Insolvency-Report.pdf (accessed on 29 August 2023).

745 *Suivi mensuel des défaillances – Janvier 2023*, Banque De France, 15 February 2023; available at: https://www.banque-france.fr/sites/default/files/webstat_pdf/def_ent_2267_fr_si_defaillances_202301_fr.pdf (accessed on 29 August 2023).

746 *Global Insolvency Report – Growing risks and uneven state support*, Allianz Research, 18 May 2022, p. 17; available at: https://www.allianz-trade.com/content/dam/onemarketing/aztrade/allianz-trade_com/en_gl/erd/publications/pdf/2022_05_18_Insolvency-Report.pdf (accessed on 29 August 2023).

747 Li, B., Ponticelli, J., *Going Bankrupt in China*, Review of Finance, Volume 26, Issue 3, May 2022, p. 461; available at: https://academic.oup.com/rof/article/26/3/449/6355599 (accessed on 29 August 2023).

748 *Ibid.*

One basis of this approach is the 2009 Opinion of the SPC[749]. It instructs the courts that even in the case of companies which have already been or are at present threatened with insolvency, the judges should look into the possibility of reorganisation and composition[750]. Indeed, the SPC and local courts have stressed that reorganisation is preferable to liquidation[751]. Up to now, all the bankruptcy cases of listed companies have preferred reorganisation without exception. Large non-listed companies often also choose reorganisation, such as Peking University Founder Group (a debt scale of over 200 billion yuan)[752]. While reorganisation of a bankrupt company is indeed often preferable to liquidation, there are limits to this principle, for instance if this leads to maintaining excess capacities that should have been eliminated long time ago. The reorganisation of Bohai Iron and Steel Group, a prominent example in the Chinese steel sector, is such a case in point where China maintains artificially alive capacities (see Chapter 14)

The reasons of this unsatisfactory state of affairs are related to a number of factors, such as *(i)* certain shortcomings of the Bankruptcy Law itself or *(ii)* the far-reaching influence of State authorities which would often pursue political and policy objectives when deciding on the fate of failing companies subject to bankruptcy procedures:

(i) The legal standards for determinations are vague, including for criteria to open the proceedings and their outcome[753]. It should also be mentioned that the approval of the relevant provincial government, the SPC, and CSRC are required to accept a reorganization case affecting a listed company[754]. Reports suggest that until 2022 no listed company failure ended up with liquidation. Instead, reorganisation was preferred[755].

A separate regime governs the bankruptcy of financial institutions, i.e. normal insolvency procedures provided for in the Bankruptcy Law may not apply to financial institutions. The banks' ultimate fate in that respect is therefore in the hands of the State Council, which is empowered to adopt bankruptcy implementing measures[756]. The draft revision of the Banking Law (see Section 6.3.3.1) foresees additional provisions, specifying under

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749 *Opinion of the Supreme People's Court on various questions related to the correct handling of enterprise bankruptcy cases so as to maintain the market economy order and provide judicial guarantees*. Notice no. 36 [2009] of 12 June 2009; available at: http://gongbao.court.gov.cn/Details/3a8f0a6153d66484528fa8d7744383.html (accessed on 8 September 2023).

750 *Ibid.*

751 For example, Section IV of the *Notice of the Supreme People's Court on Issuing the Minutes of the National Court Work Conference on Bankruptcy Trials*, available at http://gongbao.court.gov.cn/Details/2ee4b89e25f895a91885e746d361a0.html (accessed on 8 September 2023).

752 Ren Yimin, Zhu Yun, *The Insolvency Review: China*, Capital Equity Legal Group, 25 October 2022; available at: https://thelawreviews.co.uk/title/the-insolvency-review/china (accessed on 29 August 2023).

753 See Article 10 of the Bankruptcy Law which does not specify the exact criteria on which the people's court takes a decision whether a bankruptcy case is accepted by the people's court.

754 See *On the Trial of Bankruptcy and Reorganisation Cases of Listed Companies*, the Supreme People's Court, 29 October 2012, no. 261; available at: http://gongbao.court.gov.cn/Details/28b74c487b233d05d78963f466a18e.html?sw= (accessed on 29 August 2023).

755 Ren Yimin, Zhu Yun, *The Insolvency Review: China*, Capital Equity Legal Group, 25 October 2022; available at: https://thelawreviews.co.uk/title/the-insolvency-review/china (accessed on 29 August 2023).

756 See Article 134 of the Bankruptcy Law.

which conditions the banking regulatory authority under the State Council could take over a bank and what should be the main objectives of a potential reorganisation[757]. This change, if eventually signed into law, would enlarge the discretionary power of the State Council. At the same time, the effect of the current legal set-up is that, since the entry into force of the new insolvency system in 2007, only a small number of Chinese Banks such as the Liaoyang Rural Commercial Bank, Liaoning Taizihe Village Bank[758] and the relatively large Baoshang Bank have been formally allowed to file bankruptcy cases. In relation to the latter, market experts viewed the liquidation as an exceptional case[759].

(ii) Administrators of bankruptcy files are often connected to local government officials[760]. The active role of local authorities is further reflected in their control over reorganisation processes[761]. Reorganisation, rather than liquidation, has been mainly granted to SOEs and large listed firms[762] and reorganisation plans are often negotiated outside of the court proceedings, under the direct influence of - or even by - the local authorities[763]. An insolvency process appears also to present additional risks for debtor's management staff, as they may be held liable under the law and incur civil penalties. This translates, among others, into possible worries from parties involved that the insolvency process might result in them possibly facing accusations of mismanagement of state assets. In addition, the Bankruptcy Law confers broad powers on the courts to accept reorganisation plans against the will of dissenting creditors. As a result, the reorganisation process will vary depending on the court's interpretation and/or – what is more – on the will of the local authorities which operate under the pressure of potential social unrest which could be

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757 See the Notice of the Bank of China on Public Comments on the proposed draft revision of the Banking Law, 16 October 2020; available at: www.gov.cn/hudong/2020-10/16/content_5551867.htm (accessed on 29 August 2023). See further *Chinese Central Bank Overhauls Commercial Banking Law*, China Banking News, 19 October 2020; available at: https://www.chinabankingnews.com/2020/10/19/chinese-central-bank-overhauls-commercial-banking-law/ (accessed 29 August 2023).

758 *Two Chinese banks get provisional OK to enter bankruptcy proceedings*, Reuters, 26 August2022; available at: https://www.reuters.com/business/finance/two-chinese-banks-get-provisional-ok-enter-bankruptcy-proceedings-2022-08-26/ (accessed on 29 August 2023).

759 Lockett, H., Fei Ju, Sh., Yu, S., *China allows first commercial bank to go bankrupt in almost 20 years*, Financial Times, 6 August 2020; available at: https://www.ft.com/content/014d324f-0423-4345-ab54-532b98165e29 (accessed on 29 August 2023).

760 See "Bankruptcy chapter" in the 2017 version of this report for further information regarding these procedural defaults in the provisions of the Bankruptcy Law.

761 See Tomasic, R., Zhang, Z., *From Global Convergence in China's Enterprise Bankruptcy Law 2006 to Divergent Implementation: Corporate Reorganisation in China*, 2012, pp. 316-324.

762 *Ibid.*, pp. 312-314.

763 "*Although the terms of any such agreement would be negotiated with the management of the debtor, in practice the creditors would probably have to deal with the municipal government of the relevant province. Higher levels of government may also become involved in the process depending upon the importance of the debtor*". See *Restructuring Across Borders – People's Republic of China: Corporate restructuring and insolvency procedures*, Allen and Overy, May 2020, p. 6; available at: https://www.allenovery.com/global/-/media/allenovery/2_documents/practices/restructuring/restructuring_across_borders_final/peoples_republic_of_china_-_corporate_restructuring_and_insolvency_procedures.pdf (accessed on 29 August 2023). See Maliszewski, W., et al., *Resolving China's corporate debt problem*, IMF Working Paper WP/16/203, 2016, p. 16 and Tomasic, R., Zhang, Z., *From Global Convergence in China's Enterprise Bankruptcy Law 2006 to Divergent Implementation: Corporate Reorganisation in China*, 2012, pp. 319, 328.

caused by sacked or displaced workers. Thus, local party officials do have strong incentives to keep unemployment low by curbing bankruptcy cases, keeping low-productivity firms running and supporting financially distressed firms[764]. Consequently, even if the creation of specialized courts and tribunals made insolvency resolution faster and more efficient in some respects[765], political pressure on local courts persists[766]. Indeed, bankruptcy courts proceedings generally need the go-ahead of local authorities (see Section 6.7.2). Moreover, the broad decisional discretion that the Chinese courts have in the insolvency process and which, in combination with the lack of judiciary independence (see Section 3.2.2) remains an important issue hampering the efficient functioning of the bankruptcy system.

Moreover, beyond the provisions of the Bankruptcy Law, additional rules developed by the CBIRC are in place which are mainly aimed at preserving the company's assets and to reconcile the interests of the creditors, typically banking institutions, while at the same time remaining in line with *'national macroeconomic, industrial and support policies'*. In that process, the creditors are advised to avoid recalling loans in advance or ceasing lending to the company[767]. In 2021, the CBIRC issued a further set of rules[768] concerning creditors' committees[769]. The rules set out, among others, the scope of responsibilities and duties of the creditor committees, the conditions where they may be set up, or the duties of different creditor committee levels. While one of the official aims of the creditors' committee system is to support the orderly exit of zombie companies, the CBIRC rules also confirm that the other aim is to rescue companies in distress, as well enshrining the State's vision of creditor committees playing an ever more active role in bankruptcy proceedings. Indeed, it appears from various media reports that creditors' committees still are, under the veil of consensus-building, a vehicle for avoiding 'allegedly' exaggerated claim activity by certain groups of creditors in their quest for

764 Li, B., Ponticelli, J., *Going Bankrupt in China*, Review of Finance, Volume 26, Issue 3, May 2022, p. 450; available at: https://academic.oup.com/rof/article/26/3/449/6355599 (accessed on 29 August 2023).

765 *Ibid.*, p. 484.

766 *Ibid.*, p. 478.

767 CBRC notice 1196 of 6 July 2016; available at: https://www.waizi.org.cn/law/12856.html (accessed on 29 August 2023). See also Jiang, X., *Regulator calls for banks to form creditors' committees,* China Daily, 9 September 2016; available at: http://www.chinadaily.com.cn/business/2016-09/09/content_26754808.htm (accessed on 29 August 2023). See also Section 6.9.2. of the 2017 version of this Report. See further *Restructuring Across Borders – People's Republic of China: Corporate restructuring and insolvency procedures*, Allen and Overy, May 2020, p. 6; available at: https://www.allenovery.com/global/-/media/allenovery/2_documents/practices/restructuring/restructuring_across_borders_final/peoples_republic_of_china_-_corporate_restructuring_and_insolvency_procedures.pdf (accessed on 29 August 2023). "*Once a creditor committee is established, all PRC banking financiers are required to join, while other financiers (such as foreign banks) have the discretion but not an obligation to join the creditors' committee. In practice, with the informal government endorsement, the creditor committees would usually manage to take control over all or at least the majority of the assets of the debtor group.*"

768 See CBIRC *Notice on issuing working regulations concerning financial institutions' creditor committees*, issued on 6 January 2021, CBIRC [2020] No. 57; available at: http://www.cbirc.gov.cn/cn/view/pages/govermentDetail.html?docId=960104&itemId=4167&generaltype=1 (accessed on 29 August 2023).

769 See also Zhang W., and Jiajia Z., *Creditors' committees of banking institutions*, China Business Law Journal, 1 March 2019; available at: https://law.asia/creditors-committees-banking-institutions/ (accessed on 29 August 2023).

repayments. This happens very often with the support of local governments, which naturally prefer to avoid social issues linked to bankruptcy and lay-offs as well as financial trouble linked to the loss of tax revenues. Such cases result often in the borrowing banks being pushed into forced cooperation in the restructuring process via the granting of further loans or the acceptance of debt-to-equity swaps[770].

In sum, enforcement of the Bankruptcy Law remains overall weak and inconsistent. While the trend of rising defaults or near-defaults has been continuing, with more visibility in the case of SOEs, much of these instances have been handled on a case-by-case basis with differing degrees of State intervention and transparency, often resulting in restructuring or eventual recovery instead of taking out excess capacity[771]. One element that has certainly contributed to the recent relative increase in numbers of SOE bond defaults is that many SOE debts have matured in 2020-2021 (e.g., SOE bonds constituted 87 % of the RMB 8.46 trillion worth credit bonds which were to mature in 2021[772]). Due to the pandemic-related economic difficulties, it also can be assumed that local governments benefited from less fiscal space and capacity to bail out certain SOEs. In this respect, year 2020 appears clearly as standing out in terms of central and local SOEs bond default amounts in comparison to previous years[773]. Some see the rising number of SOE defaults (25 in first half of 2021 as compared to 19 in the same period of 2020)[774] as pointing towards a policy-change by the Chinese authorities, such as reducing implicit guarantees for SOEs[775]. However, the numbers are too small to support credibly such a conclusion. Moreover, even if there were a certain policy change, there is no indication to assume that the State has reduced its central role in the financial system[776].

The continued (and artificially) low number of insolvencies in relative terms has two important effects. First, the practice of keeping companies alive in most of the cases results in the survival

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770 Wildau G., *Regulator urges China banks to save ailing companies*, Financial Times, 26 May 2017; available at: https://www.ft.com/content/5455689c-41c7-11e7-9d56-25f963e998b2 (accessed on 29 August 2023).

771 "*By end-February 2020, half of the SOEs that had defaulted were in full or partial recovery, including six that repaid bondholders in full. All of the examples involving full recovery of payments due were achieved without entering into any court-administered bankruptcy proceedings. Most were completed within one week following the default. In contrast, only 22% of privately owned enterprises made full or partial repayments after default.*"' See *Ownership and Sector Key Factors in China SOE Defaults*, Fitch Ratings, 30 March 2020; available at: https://www.fitchratings.com/research/corporate-finance/ownership-sector-key-factors-in-china-soe-defaults-30-03-2020 (accessed on 29 August 2023). See also Cong, L.W., Gao, H., Ponticelli, J., Yang, X., *Credit Allocation Under Economic Stimulus: Evidence from China,* Review of Financial Studies, September 2019, p. 3450; available at: https://academic.oup.com/rfs/article-pdf/32/9/3412/29194622/hhz008.pdf (accessed on 29 August 2023).

772 See *SOE bonds in 2021*; available at: https://finance.sina.com.cn/money/bond/market/2020-12-28/doc-iiznezxs8760202.shtml?cre=tianyi&mod=pcpager_tech&loc=23&r=9&rfunc=100&tj=none&tr=9 (accessed on 29 August 2023).

773 See Figure 15 in *The Internationalization of the China Corporate Bond Market*, ICMA, Zurich, 2021, p. 20; available at: https://www.icmagroup.org/assets/documents/About-ICMA/APAC/The-Internationalization-of-the-China-Corporate-Bond-Market-January-2021-140121.pdf (accessed on 24 August 2023).

774 Murugaboopathy, P., Galbraith, A., *China's corporate bond defaults touch a record high*, Reuters, 9 July 2021; available at: https://www.reuters.com/world/china/chinas-corporate-bond-defaults-touch-record-high-2021-07-09/ (accessed on 29 August 2023).

775 Adams, N., Jacobs, D., Kenny, S., Russell, S., Sutton, M., *China's Evolving Financial System and Its Global Importance*, Reserve Bank of Australia, 2021, p. 75.

776 *Ibid.*, p. 72.

of large numbers of unviable companies, which contributes to the persistence of excess production capacities (see for example Chapters 14, 15, 17). Second, the relatively low reliance on bankruptcy proceedings, in particular concerning SOEs, creates a specific market perception of the corporate fabric in China which reverberates in Chinese financial and borrowing markets. Indeed, the governmental and judiciary-induced practice of keeping companies alive amounts to granting implicit State guarantees to these companies, thereby artificially reducing the costs of credit and of access to finance, and resulting in vast amounts of loans received by State-related firms at attractive rates, at the expense of private players[777]. Despite a recent increase in the number of SOE defaults (the numbers are still very small), there are no clear signs that the phenomenon of implicit guarantee or State preferential treatment or support for SOEs is to disappear[778]. Indeed, as observed by experts at the end of 2020[779]:

> *market consequences of defaults* [...] *can easily escalate and start to have major implications for the functioning of credit markets. The PBOC and other financial regulators certainly do not wish to see this happen. In its* [...] *quarterly monetary policy report* [...] *the PBOC said it would "resolutely prevent local risks from developing into systemic risks, and regional risks from evolving into national risks."* [780] *That means it will try to strike a balance between gradually letting insolvent SOEs default, and preventing those events from causing a credit squeeze.*

The shortcomings in the functioning of the bankruptcy system affect at the same time the viability of the Chinese banking system[781], with the Chinese financial institutions, however, as specified above, largely shielded from normal insolvency procedures.

6.8. CHAPTER SUMMARY

Despite changes throughout the past decades, the current Chinese financial system is still characterized by two features: (1) a strong presence of state-owned banks and (2) a widespread influence of the State which imposes on the financial system a number of policy objectives, in particular the implementation of the sophisticated economic planning system. Moreover, the recent/ongoing changes in the organisational set-up of the regulatory bodies confirm and reinforce the subordination of these bodies to the CCP (see Section 6.2.2).

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777 Balding, C., *China takes on State-owned firm.* Bloomberg News, 10 August 2017; available at: https://www.bloomberg.com/view/articles/2017-08-10/china-takes-on-state-owned-firms (accessed on 29 August 2023). See also *A moral deficit,* The Economist, 18 October 2014; available at: https://www.economist.com/news/finance-and-economics/21625823-rein-its-debt-china-must-be-willing-let-companies-fail-moral-deficit (accessed on 29 August 2023); see further Anzoategui, D., Chivakul, M., Maliszewski, W., *Financial Distortions in China: A General Equilibrium Approach*, IMF Working Paper WP/15/274, pp. 5-8; available at: http://www.imf.org/external/pubs/ft/wp/2015/wp15274.pdf (accessed on 29 August 2023).

778 See further *China Bond Monitor: SOE credit differentiation will intensify*, Moody's Investor Service, 20 May 2021, p. 4: "*Despite a handful of SOE default cases in recent years, onshore investors still prefer SOEs over POEs [privately owned enterprises] because of the expected government support for SOEs*".

779 See He, W., *Eroding the Implicit Guarantee*, Gavekal Dragonomics, 1 December 2020.

780 See *China Monetary Policy Implementation Report Q3 2020*; available at: www.pbc.gov.cn/goutongjiaoliu/113456/113469/4133903/20201126154730382 46.pdf (accessed on 29 August 2023).

781 Wu, Y., & Pan, H., *Zombie firms and corporate financialization: evidence from China*, Review of Managerial Science, 2023, p. 12.

The Chinese financial system remains centred around banking, with RMB-denominated bank loans accounting for the largest portion of aggregate financing to the real economy in the country (see Section 6.3.1). The most important categories of banks in China are the following: large state-owned commercial banks, joint-stock commercial banks and policy banks. The rest is mainly accounted for by smaller rural or city commercial banks which are mostly owned by local or provincial governments. Foreign-invested banks remain negligible in China's banking sector (see Section 6.3.1.4). The State dominance over the banking sector and the legal framework which encourages lending in line with industrial policies, perpetuates the existence of significant shadow banking sector, given that certain categories of economic operators may face difficulties to raise capital in the current system (see Section 6.3.1.5).

The State controls the banks through various channels, in particular through direct and indirect ownership which in turn facilitates its control over the management bodies of the banking institutions (see Section 6.3.2.1). Moreover, irrespective of the degree of State ownership, all important banks host internal CCP organisations. As apparent from relevant legislation, as well as from the AoA of major banks, significant personnel overlaps between the management of the banks and the Party organisations are in place (and indeed required) and the CCP organisations have to be involved in major operational and management issues of the respective banks (see Section 6.3.2.2).

The legal framework spells out that banks are to implement China's economic policy. Article 1 of the Banking Law stipulates, inter alia, that banks promote the development of the socialist market economy and Article 34 states that "[c]*ommercial banks shall conduct their business in accordance with the needs of the national economic and social development and under the guidance of the industrial policies of the State*". Provisions to a similar effect can be found in other pieces of applicable legislation, such as the Decision No. 40 or the CBIRC's Notice on the Commercial banks' performance evaluation method (see Section 6.3.3.).

The bond and stock markets in China are of lower importance compared to the banking sector. However, they too are tightly regulated to ultimately serve as tools for channelling capital to priority projects in line with the State's economic priorities (see Section 6.4.1). The Chinese bond market, other than being characterized by a high proportion of government bonds and by a strong presence of banks, also continues to feature irregularities related to credit risk assessment which in turn contribute to inappropriate functioning of the market and, therefore, to its imbalances (see Section 6.4.2). Similarly, the economic fundamentals and regulatory setup of the Chinese stock markets are not conducive to effective allocation of resources in the economy (see Section 6.4.3).

A relatively new financial tool are the GGFs, the purpose of which is to raise money from public and private sources and to make investments consistent with government priorities (see Section 6.5). Even if their actual track record in achieving the official goals may be mixed at the time of writing of this Report, their very size relative to the size of the market makes GGFs a distortive tool in their very nature, in any event strengthening the government control over resource allocation (see Section 6.5.3).

As to the export credit insurance market, Sinosure, as the main operator on the market remains fully State-controlled both in terms of ownership as well as stated purpose. Consequently, Sinosure appears to be mainly fulfilling the State's policies with limited regard to commercial considerations when providing insurance. In combination with China not being bound by the OECD-based rules, this results in export credit insurance typically being offered on inappropriately favourable terms to Chinese companies (see Section 6.6).

Last but not least, the number of bankruptcy cases, which is very low for an economy of China's size, points to serious issues with the enforcement of bankruptcy laws, stemming from a number of flaws in these laws, as well as from their inadequate implementation. In particular, the State plays an unduly active role in the bankruptcy proceedings, not least in view of the lack of Chinese judiciary system's independence, as well as given the government authorities' involvement in individual bankruptcy cases, often influencing their outcome. Consequently, the Chinese bankruptcy system continues to operate inadequately, with the slow progress on addressing core issues – such the removal of the implicit guarantees and tightening SOEs budget constraints – being reported (see Section 6.7 and 6.4.2.2).

Overall, the functioning of the entire financial system is characterized by high State presence on both borrowing and lending side, as well as by the absence of normal market mechanisms such as effective and transparent bankruptcy and market exit procedures.

7. PUBLIC PROCUREMENT IN CHINA

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7.4. Chapter Summary 204

7.1. LEGAL FRAMEWORK

Public procurement in China is governed by a set of laws and regulations that concern the purchase of goods, services and construction projects by government agencies and SOEs.

China's legal and institutional framework for public procurement is complex and fragmented. It is made up of two principal pieces of legislation, the Government Procurement Law ('*GPL*') [782] and the Tendering and Bidding Law ('*TBL*') [783], as well as their respective implementing

[782] See Section 7.1.2.1 below.
[783] See Section 7.1.2.2 below.

rules and regulations. The GPL regulates all aspects of government procurement but does not cover procurement by SOEs and procurement of construction projects where a tendering procedure is used. The TBL applies to the procurement of construction projects by public entities, including SOEs, which are subject to tendering procedure (see Section 7.1.2.1 for details).

In 2021 the total value of procurement by SOEs using public funds exceeded RMB 35 trillion[784] (see also Section 7.2). Given that the GPL does not apply to SOEs, it is worthwhile noting that a draft GPL revision[785] would, for the first time, cover SOEs as procuring entities (see Section 7.1.2.1). However, as of writing of this Report, there was no set timetable as to when it would take effect.

The main actors involved in government procurement in China are:

- MOF: in charge of enforcing the GPL and of the management of the purchases of goods and services for government departments.
- NDRC: in charge of drafting the TBL and its implementing rules. It defines the national economic plan and approves the centrally funded large scale infrastructure projects.
- Ministry of Housing and Urban and Rural Development: in charge of the management of general construction procurement and the implementation of the TBL.
- MOFCOM: in charge of international trade and the procurement of electronic equipment.

7.1.1. WTO Law

Government procurement is excluded from the WTO's multilateral trade agreements. Early efforts to bring government procurement under internationally agreed trade rules were undertaken in the OECD framework[786]. To ensure open, fair and transparent conditions of competition in the government procurement markets, a number of WTO members have negotiated the Agreement on Government Procurement (*'GPA'*), which is a plurilateral agreement within the framework of the WTO.

China is not a member of the GPA, nor has it signed any multilateral agreements on market access for government procurement. However, China's membership in the WTO entails certain government procurement-related obligations with respect to non-discrimination, most-favoured nation (*'MFN'*) treatment and transparency.

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784 See China Government Procurement News (15 April 2022), *China's total public procurement exceeded 45 trillion yuan last year*, Zhejiang Government Procurement Website, available at: https://zfcg.czt.zj.gov.cn/training/2022-04-15/15195.html (accessed on 16 June 2023). See also CCTV (8 April 2022), *'China's Public Procurement Development Report (2021)' released, the country's total public procurement exceeded 45 trillion yuan in 2021,* available at: http://www.chinawuliu.com.cn/lhhzq/202204/08/574887.shtml (accessed on 16 June 2023).

785 See *Notice on the Government Procurement Law of the PRC (Draft Revision) is again open to the public for comments*, available at: http://gks.mof.gov.cn/gongzuodongtai/202207/t20220715_3827392.htm (accessed on 19 June 2023); see also China Proposes New Revision of Procurement Law, available at: https://trade.djaghe.com/?p=7409 (accessed on 19 June 2023).

786 See OECD (2015). *OECD recommendation on public procurement*, pp. 3, 13, available at: https://www.oecd.org/gov/public-procurement/OECD-Recommendation-on-Public-Procurement.pdf (accessed on 16 June 2023).

The Protocol on the Accession of the PRC to the WTO ('*CAP*')[787] commits China to afford MFN treatment in government procurement processes. China must ensure that "*all government entities at the central and sub-national level, as well as any of its public entities other than those engaged in exclusively commercial activities,* [will] *conduct their procurement in a transparent manner, and provide all foreign suppliers with equal opportunity to participate in that procurement pursuant to the principle of MFN treatment, i.e., if a procurement was opened to foreign suppliers, all foreign suppliers would be provided with equal opportunity to participate in that procurement (e.g., through the bidding process)*"[788].

In the CAP, China has committed also to certain transparency obligations. China pledged that the procurement of all government entities at the central and sub-national level, as well as any of its public entities other than those engaged in exclusively commercial activities, will "*be subject only to laws, regulations, judicial decisions, administrative rulings of general application, and procedures (including standard contract clauses) which had been published and made available to the public*"[789]. Moreover, China has committed to seek accession to the GPA under the CAP[790].

China's transparency obligations, and in particular the requirement to publish the measures governing government procurement, are therefore not limited to procurement tenders that have been opened to foreign suppliers but apply to all procurement tenders, including those where only domestic entities and their products and services compete.

7.1.2. CHINESE LAW

7.1.2.1. THE GOVERNMENT PROCUREMENT LAW

The GPL[791], in force since 2003[792], is the basic law governing all aspects of public procurement in China: principles, organisation, coverage, procurement methods and procedures, suppliers review, supervision and liabilities.

Article 2 of the GPL defines the scope of its application as *"the government procurement activities carried out within the territory of the People's Republic of China"*. It defines

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787 WTO Protocol on the accession of the PRC - WT/L/432 (2001), available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/L/432.pdf&Open=True (accessed on 19 June 2023). This commitment is memorialized in para. 339 of the WTO Report of the Working Party on the Accession of China (*'Working Party Report'*) - WT/ACC/CHN/49 (2001), available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/WT/ACC/CHN49.pdf&Open=True (accessed on 19 June 2023). According to Paragraph 1.2 of the CAP, '[t]his Protocol, which shall include the commitments referred to in paragraph 342 of the Working Party Report, shall be an integral part' of the Agreement Establishing the WTO.

788 Working Party Report, para. 339.

789 *Ibid.*

790 Working Party Report, paras. 339 and 341

791 The Government Procurement Law, available at: https://www.pingli.gov.cn/UploadFiles/akjyhfj67/file/20210115/20210115165655_8831.pdf (accessed on 19 June 2023) and http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/06/content_1382108.htm (accessed on 3 November 2023).

792 Most recently amended in 2014, see Standing Committee of the 12th NPC (2014), *Decision of the Standing Committee of the National People's Congress on Revising the Insurance Law of the People's Republic of China and Four Other Laws*, available at: http://www.npc.gov.cn/zgrdw/npc/lfzt/rlyw/2014-09/01/content_1933317.htm (accessed on 19 June 2023).

government procurement as *"the purchasing activities conducted with fiscal funds by government departments, institutions and public organisations at all levels"* of goods, construction works and services that are in the Centralised Procurement Catalogue (*'CPC'*) or whose values exceed the respective Prescribed Procurement Threshold (*'PPT'*)[793].

The GPL does not provide a definition of 'contracting authority' or 'procuring entity' but only states that state organs, institutions and organisations at all levels are covered without defining them. An important point is that only procurement by these entities using 'fiscal funds' is covered by the GPL. Therefore, any entity financed by the state budget (central or local) could be covered by the GPL. However, the GPL does not define fiscal funds.

Article 4 of GPL excludes from its scope of application government procurement of construction projects subject to tendering procedures, which are regulated by the TBL. In addition, military procurement is not governed by the GPL but by internal military rules.

The Implementing Regulations of the GPL (*'IRGPL'*)[794] supplement the text of the law in ways that define 'fiscal funds', expand the GPL's scope of coverage and provide transparency requirements:

- *Definition of 'fiscal funds':* Article 2 of the IRGPL defines 'fiscal funds' as funds covered by the budget management.
- *Expansion of scope*: Article 2 of the IRGPL expands the coverage of government procurement by noting that *"where both fiscal funds and non-fiscal funds are used for the procurement projects of State organs, public institutions and public organizations, the portions procured with fiscal funds shall be governed by the GPL and these Regulations; and, where fiscal funds cannot be separated from non-fiscal funds in procurement, the GPL and these Regulations shall apply in a uniform manner."*
- *Transparency Requirements*: The IRGPL intend to improve transparency of government procurement and e-procurement. Article 8 requires that all government procurement projects be published on the media designated by the finance departments at and above the provincial level. Article 10 stipulates that China will issue unified standards on government procurement electronic transaction platforms, with a purpose to promote and encourage e-procurement across China.

In July 2022, MOF released for public comments the second draft revision of the GPL (*'Draft GPL Revision'*), which makes substantial changes in order to both implement requirements set forth in the Central Commission for Deepening Reform's Plan to Deepen the Reform of the Government Procurement System and accelerate the negotiation process for China's accession to the GPA[795].

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793 GPL, Art. 2.

794 Implementing Regulations of the GPL, adopted on the 31 December 2014 by the 75th Executive Meeting of the State Council and entered into force on 1 March 2015. State Council Document number 658, available at: https://www.gov.cn/gongbao/content/2015/content_2827183.htm (accessed on 20 November 2023)

795 See MOF (2022), *Government Procurement Law of the PRC (Revised Draft for Comments)*. http://gks.mof.gov.cn/gongzuodongtai/202207/t20220715_3827392.htm (accessed on 19 June 2023). See

The Draft GPL Revision would maintain the territorial scope of the original law (i.e. "*all the government procurement activities carried out within the territory of the People's Republic of China*"), but change the definition of regulated purchasing activities to *"the acquisition of goods, construction works, and services by means of contract using fiscal funds or other state-owned assets by all levels of state authorities, institutions, social organizations and other procurement entities as needed for the performance of their functions or providing public services, including without limitation, purchases, leases, service engagements, and public-private partnerships ('PPPs')"*[796].

It is noteworthy that the Draft GPL Revision expands procuring entities to include '*other procurement entities*', adds '*other state-owned assets*' as the source of funds in addition to fiscal funds and removes certain limitations on good and services to be procured. Article 12 of the Draft GPL Revision further defines '*other procurement entities*' as '*public welfare-oriented SOEs that engage in public utility services, operate public infrastructure or operate public service networks for public purposes*'[797]. Such SOEs and their specific procurement scope will be determined by the State Council.

The GPL is administered by MOF and applies to all funds controlled or allocated by the ministry. For a long time, procuring entities covered by the GPL have been governmental, including all central and local bodies making use of fiscal funds (e.g. provinces, municipalities, hospitals). Entities using non-fiscal funds or fiscal funds below the PPT have been exempted. Such entities may no longer be exempted once the Draft GPL Revision takes effect, as procuring entities using other state-owned assets, including SOEs, will fall within the scope of regulated entities[798]. The Draft GPL Revision would further make significant changes to existing procurement methods[799].

7.1.2.2. THE TENDERING AND BIDDING LAW

The TBL[800], in force since 2000[801], is the basic law regulating bidding activities in China. Article 2 of the TBL stipulates that it is *"applicable to any bid invitation and bidding activities conducted within the territory of the People's Republic of China"*.

Article 3 of TBL provides that tendering procedures shall be carried out for the following construction projects undertaken within China's territory, including the surveying and investigation, design, construction and construction supervision of such projects as well as the procurement of relevant major equipment and materials for such projects [...]:

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also Xinhua News Agency (16 November 2018), *The fifth meeting of the Central Comprehensive Deepening Reform Committee reviewed and approved the "Deepening Government Procurement System Reform Plan"*, available at: http://www.cgpnews.cn/epapers/46544?epaper_period_id=3814 (accessed on 19 June 2023).

796 Draft GPL Revision, Art. 12.

797 *Ibid.*

798 *Ibid.*, Art. 2.

799 Draft GPL Revision, Art. 56-70.

800 The TBL, available at: http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/11/content_1383557.htm (accessed on 19 June 2023).

801 Most recently amended in 2019.

(1) *Large-scale infrastructure projects and public utility projects concerning public interests and public security;*
(2) *Projects invested completely or partly by the government or funded through state financing;*
(3) *Projects using loans and aid funds from international organizations or foreign governments.*

Consequently, the TBL applies to certain tendering activities of both public and private companies, including SOEs. It is not only linked to the nature of the funds (either fiscal or private), but also to the nature of projects. However, it does not regulate purchases using only private funds that do not also include the activities listed above.

Under the TBL, the following bidding methods[802] exist:

- *Open tenders*: the organising entity, in the form of tender notice, invite unspecified legal persons or other organizations to bid.
- *Selective tenders*: the organising entity, in the form of invitation to bid, invite specified legal persons or other organizations to bid.

Although the TBL does not require a public procurement notice for selective tenders, relevant procurement information needs to be published according to the GPL and associated regulations. Local governments may establish their own rules that supplement the TBL[803].

In December 2019, NDRC solicited public comments on a revised version of the TBL ('*Draft TBL Revision*') and issued a document that compared the TBL and the revised draft[804]. The comment period ended on 1 January 2020, but NDRC has subsequently not indicated if and when revisions would be enacted.

7.1.2.3. Regulatory Conflicts Between the GPL and the TBL

There is a continuous tension between the two basic Acts. The EU-China Trade Project carried out a comprehensive study on the conflicts between the GPL and TBL. Although this study was delivered in 2008 and in 2014 the IRGPL providing some clarifications were issued, there are still some areas of conflicts between the two basic acts.

The GPL (Article 2)[805] applies to government procurement activities conducted with fiscal funds by all public administration levels, for goods, construction and services included in the CPC and for values exceeding a PPT.

In contrast, the TBL (Article 3)[806] applies to tendering activities of both fiscal and private entities, including SOEs, in large-scale infrastructure projects and public utility projects concerning public interests and public security; projects invested completely or partly by the

802 TBL, Art. 10.
803 Chen, J. (2019). Public Procurement in China. Lexology. https://www.lexology.com/library/detail.aspx?g=3f2001cc-811a-4e32-81f3-0e8bbc853df6 (accessed on 20 October 2023).
804 NDRC (2019). *Announcement on the Public Consultation of the "Law of the People's Republic of China on Tendering and Bidding (Revised Draft for Public Comment)"*; available at: https://hd.ndrc.gov.cn/yjzx/yjzx_add.jsp?SiteId=325 (accessed on 19 June 2023).
805 See explanations in Section 7.1.2.1
806 See explanations in Section 7.1.2.2

government or funded through state financing; and projects using loans and aid funds from international organizations or foreign governments.

The two sets of legislation overlap when the construction projects falling under the TBL are conducted with fiscal funds.

Article 4 of GPL tries to address this clash by providing that the TBL applies when bidding is used for government procurement of construction works. This implies that the TBL does not apply to tendering procedures in government procurement of goods and services and to government procurement of works, in which tendering procedure is not used. The delimitation of the respective scopes of application has been further clarified in the respective implementing regulations. Article 83 of the TBL Implementing Regulation[807] (*'IRTBL'*) states that government procurement of goods and services through tendering are subject to government procurement laws and administrative regulations (i.e. GPL and IRGPL). Article 7 of the IRGPL provides that government procurement of works and related goods and services through (open and selective) tendering is subject to the TBL and that government procurement of works using procuring methods other than tendering procedures are subject to the GPL and IRGPL.

But the current practice still involves the application of the GPL when fiscal funds are used. Tangible and explicit evidence of this risk is contained in Article 22 of the Notice on Implementing Several Supporting Policies for the Outline of the National Medium - and Long-Term Program for Science and Technology Development (2006-2020)[808] issued by the State Council in 2006:

> *For major national construction projects and other major equipment and products procurement projects involving fiscal funds, the relevant authorities shall list a commitment to procuring indigenous innovation projects as one of the conditions in their projects application and clearly indicate the specific requirements for procuring indigenous innovation projects. For key projects with government investment from the state or local level, the ratio of procuring domestic equipment shall be no less than the 60% of the total value. The finance department shall not release the funds if the requirements of procuring indigenous innovation projects are not satisfied.*

The potential inconsistency in the application of one or the other legislation generates uncertainty for both procuring entities and suppliers.

The GPL and TBL overlap could be enlarged if the Draft GPL Revision and the Draft TBL Revision take effect in their proposed redactions. The Draft GPL Revision would encompass SOEs as procuring entities and apply to procurement activities conducted with fiscal funds or other state-owned assets[809]. The Draft TBL Revision would apply to construction projects above certain thresholds that use government funds, are financed by the government or use

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807 See IRTBL https://www.gov.cn/gongbao/content/2019/content_5468831.htm (accessed on 20 November 2023)

808 *Notice on Implementing Several Supporting Policies for the Outline of the National Medium- and Long-Term Program for Science and Technology Development* (2006-2020), Article 22 (State Council, No. 6, 2006).

809 See Draft GPL Revision, Art. 2.

loans and aid funds from international organizations or foreign governments[810]. There accordingly would be an overlap when construction projects falling under the Draft TBL Revision, including those owned by SOEs, are constructed with fiscal funds or other state-owned assets, which would fall under the Draft GPL Revision.

7.1.2.4. OTHER REGULATIONS CONCERNING GOVERNMENT PROCUREMENT

A number of other regulations govern public procurement activity in China, including *inter alia*:

- *Measures for the Administration of the Government Procurement of Imported Products* (effective since 27 December 2007): Regulates government procurement of imported products in China, including setting out procedures for procuring such products. Defines imported products and specifically requires that domestic products should be procured unless it is absolutely necessary to purchase imported products and imported products may only be procured upon examination and approval by MOF[811].
- *Administrative Measures for Non-Bidding Government Procurement* (effective since 1 February 2014): Outlines procedures for non-bidding government procurement in China[812].
- *Measures for the Administration of Tendering and Bidding for Government Procurement of Goods and Services* (effective since 1 October 2017) or Decree No. 87: Regulates government procurement of goods and services through bidding in China[813].
- *Measures for the Administration of the Government Procurement of Services* (effective since 1 March 2020): Regulates government procurement of services in China. Sets out procedures for procuring services, including the use of public tendering and competitive negotiation[814].
- *Administrative Measures for the Release of Government Procurement Information* (effective since 1 March 2020): Sets rules for releasing government procurement information through designated platforms in China[815].
- *Circular on Publication of Government Procurement Intentions* (effective since 2 March 2020): Requires publication of government procurement goals on designated platforms in China[816].

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810 See Draft TBL Revision, Art. 3.

811 General Office of the State Council (2007). *Administrative Measures for Government Procurement of Imported Products*; available at: http://www.gov.cn/ztzl/kjfzgh/content_883643.htm (accessed on 19 June 2023).

812 MOF (2013). *Administrative Measures for Non-Bidding Government Procurement*; available at: http://www.gov.cn/zhengce/2014-01/03/content_2603509.htm (accessed on 19 June 2023).

813 MOF (2017). *Measures for the Administration of Tendering and Bidding for Government Procurement of Goods and Services*; available at: http://www.gov.cn/gongbao/content/2017/content_5241918.htm (accessed on 19 June 2023).

814 MOF (2020). *Measures for the Administration of the Government Procurement of Services*; available at: http://www.gov.cn/gongbao/content/2021/content_5582627.htm (accessed on 19 June 2023).

815 MOF (2019). *Administrative Measures for the Release of Government Procurement Information*; available at: http://www.gov.cn/xinwen/2019-12/11/content_5460211.htm (accessed on 19 June 2023).

816 MOF (2020). *Circular on Publication of Government Procurement Intentions*; available at: http://www.gov.cn/zhengce/zhengceku/2020-03/11/content_5489882.htm (accessed on 19 June 2023).

- *Interim Administrative Measures for Procurement under the Government Procurement Framework Agreement* (effective since 1 March 2022): Regulates government procurement where the procuring entity or an organ in charge of departmental budgeting determines shortlisted suppliers and creates a framework agreement through public solicitation procedures[817].
- *Regulation on the Implementation of the Bidding Law of the People's Republic of China* (2019 Revision effective since 2 March 2019): Regulates bidding activities[818].

In addition, procurement regulations in a wide variety of sectors – ranging from education to environmental protection and wireless local area network products – are issued by the ministry in charge of the sector either on its own or in conjunction with MOF.

Some of these regulations are intended to set detailed procedures. For example, Decree No. 87 of the MOF[819] clarifies specific rules applicable to public tenders, ranging from the modalities and timing of their announcement to their evaluation and the awarding of the contracts. MOF issued a revised draft for public comments in April 2021[820].

Others – such as those for wireless local areas network products – are designed to promote domestic industries (see also Section 7.3.1). For instance, the MOFCOM enacted its own set of regulations in the field of electrical equipment, thus adding to the complexity of the system.

7.1.2.5. CONCESSION RULES

Public concessions are usually intended as a tool under which non-governmental investors (state-owned or private) are granted the right to invest, construct and operate a public infrastructure or utility project for a certain period of time.

There is no unified legal framework on concession contracts. However, some sectoral provisions exist. For instance, the Administrative Measures on Infrastructure and Public Utilities Concessions[821] issued by NDRC, MOF, the Ministry of Housing and Urban-Rural Development, Ministry of Transport, Ministry of Water Resources, and the PBOC in 2015 established a legal framework for infrastructure and public utility-related work and service concessions, covering energy, transportation, water conservancy, environmental protection, municipal engineering and other fields of infrastructure and public utilities within Chinese

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817 MOF (2022). *Interim Administrative Measures for Procurement under the Government Procurement Framework Agreement*; available at: http://www.gov.cn/gongbao/content/2022/content_5687507.htm (accessed on 19 June 2023).

818 Order No.709 of the State Council of the PRC, available at: https://www.pkulaw.com/en_law/e7f93f8a4b71aef3bdfb.html (accessed on 14 November 2023).

819 Decree No. 87 issued by the MOF on 11 July 2017, in force as of 1 October 2017, revising the Measures for the Administration of Tendering and Bidding for Government Procurement of Goods and Services. This Decree specifies that its provisions are made '[…] *according to Government Procurement Law, the Government Procurement Law Implementing Regulations […]'* (Article 1).

820 MOF (2021). *Measures for the Administration of Tendering and Bidding for Government Procurement of Goods and Services (Revised Draft for Public Comments)*; available at: https://www.ccgp.gov.cn/news/202105/t20210510_16258407.htm (accessed on 19 June 2023).

821 See Measures for the Administration of Infrastructure and Utilities Concessions; available at: https://www.gov.cn/zhengce/2015-04/25/content_5712289.htm (accessed on 19 June 2023).

territory ('*Concession Rules*'). Under the Concession Rules, a concession can only be granted by means of competition including with respect to bidding and competitive negotiation[822].

7.2. VALUE OF THE PROCUREMENT MARKET

According to data provided to the WTO by the Chinese authorities, the total value of the public procurement market in China, consisting of tenders issued by Chinese central and local governments regulated under the GPL, represents 3.3% of China's GDP (i.e. RMB 3.3 trillion in 2019)[823].

The overall value of the public procurement market in China significantly increases when SOEs procurement activities not governed under the current GPL are included, boosting the total value to over RMB 14 trillion from 2019 through June 2020[824]. However, given that the precise data concerning procurement expenditures not governed under the GPL are unavailable, this section focuses on public procurement in China specifically regulated under the GPL.

Table 7.1: Value of the Procurement Market in China[825]

in billion RMB	2017	2018	2019
Government procurement under GPL	3 211	3 586	3 307
% of GDP	3.8%	3.9%	3.3%
% of government expenditure	15.8%	16.2%	13.9%

The value of China's public procurement market under the GPL increased from roughly EUR 73 billion in 2009 to almost EUR 450 billion in 2019, an increase of more than 300% over this period[826]. The primary source of public procurement governed in China can be attributed to procurement by local entities, which accounted for 91.9% of the total value of China's government procurement in 2019. The remaining 8.1% pertains to central government procurement[827].

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822 The World Bank (2015). *Measures (regulations) for the administration of concession for infrastructure and public utilities*; available at: https://ppp.worldbank.org/public-private-partnership/library/measures-regulations-administration-concession-infrastructure-and-public-utilities-chinese-%E5%9F%BA (accessed on 19 June 2023).

823 *Trade Policy Review on China*, WTO (2021), p. 99; available at: https://www.wto.org/english/tratop_e/tpr_e/s415_e.pdf (accessed on 19 June 2023).

824 US-China Business Council. (2021). *Government procurement and sales to State-Owned enterprises in China*, p. 1, available at: https://www.uschina.org/sites/default/files/uscbc_government_procurement_report_2021.pdf (accessed on 19 June 2023).

825 *Trade Policy Review on China*, WTO (2021), pp. 16-17, 99-102; available at: https://www.wto.org/english/tratop_e/tpr_e/s415_e.pdf (accessed on 19 June 2023).

826 *Ibid.* In USD, the public procurement market grew roughly from USD 100 billion in 2009 to almost USD 500 billion in 2019. Conversion to EUR is based on the average exchange rate during the timeframe referenced, using the exchange rate calculator publicly available on the European Central Bank's website. *Euro foreign exchange reference rates*, European Central Bank, 2023; available at: https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html (accessed on 19 June 2023).

827 *Trade Policy Review on China*, WTO (2021), p. 99; available at: https://www.wto.org/english/tratop_e/tpr_e/s415_e.pdf (accessed on 19 June 2023).

Table 7.2: Government Procurement by Entities[828]

in billion RMB	2017	2018	2019
Total procurement by the central government	191.3	224.0	266.6
Total procurement by local government entities	3 020.2	3 362.1	3 040.0
TOTAL	**3 211.4**	**3 586.1**	**3 306.7**

Construction and engineering projects account for the majority of China's public procurement expenditure, accounting for 45% of the total expenditure in 2019. These projects include, but are not limited to, funds allocated for construction, demolition and renovation. Purchases of other services, including items such as maintenance, IT and training accounted for 29% of the total expenditure. The remaining 26% can be attributed to purchases of goods (e.g. equipment), which saw the greatest sustained growth in value out of all the purchase categories, increasing by an average annual growth rate of 4%[829].

Table 7.3: Government Procurement by Nature of Expenses[830]

in billion RMB	2017	2018	2019
Construction and engineering services	1 521.1	1 571.4	1 500.4
Other services	890.2	1208.1	945.5
Goods	800.2	806.5	860.7
TOTAL	**3 211.4**	**3 586.1**	**3 306.7**

7.3. DISTORTIONS

Despite the existence of legal provisions, Chinese public procurement policies discriminate in favour of domestic goods, construction and services. The allocation of contracts under public procurement is not always done in a competitive way or based on market rules, as illustrated by the non-exhaustive set of examples below.

7.3.1. DISTORTIONS ASSOCIATED WITH THE GPL

In the GPL and the IRGPL, the discrimination in favour of domestic goods, construction and services is explicit.

7.3.1.1. 'BUY CHINESE'

Article 10 of the GPL stipulates: "*The government shall procure domestic goods, construction and services, except in one of the following situations:*

828 *Ibid.*
829 *Ibid.*
830 *Ibid.*

(1) where the goods, construction or services needed are not available within the territory of the People's Republic of China or, though available, cannot be acquired on reasonable commercial terms;
(2) where the items to be procured are for use abroad; and
(3) where otherwise provided for by other laws and administrative regulations."

Article 23 of the Draft GPL Revision contains similar '*Buy Chinese*' provision, adding that *"products manufactured in China that meet the specified added value rate and other criteria shall be evaluated preferentially in government procurement activities"*[831].

Article 7 of the IRGPL clarifies that government procurement of construction works and the goods and services related to constructions shall be subject to government procurement policies (i.e. the policy objectives laid down in the GPL, including the '*Buy Chinese*' requirement despite the fact that their tendering procedure is subject to the TBL).

Article 4 of the Measures for the Administration of the Government Procurement of Imported Products provides that *"government procurement shall purchase domestic products, and if it is really necessary to purchase imported products, audit management shall be implemented"*. Such procurement is subject to rigorous application-evaluation- approval procedure to enforce the '*Buy Chinese*' requirement. Indicative 'positive lists' of imported products that can be procured also exist and national and local levels. Article 5 of the Measures for the Administration of the Government Procurement of Imported Products provides for the use of offsets, such as technology transfer requirements, by stipulating that *"when purchasing imported products, purchasers should adhere to the principle of being conducive to independent innovation or digestion and absorption of core technologies by domestic enterprises and give priority to purchasing products that transfer technology to us, provide training services and other compensation trade measures"*.

The preferential treatment of domestic goods, construction and services is discriminatory towards foreign goods, construction and services and *de facto* towards foreign bidders offering them. This results in a reduced competition in the procurement process. On the one hand, this could lead to a higher award price, and on the other hand, the offered range of goods/services is limited, with possible negative impact on the delivered quality. This policy is therefore at odds with market-based rules and the principle of non-discrimination.

In October 2021, MOF published the Notice on Implementing the Policies on Equal Treatment of Domestic and Foreign-invested Companies in Government Procurement Activities, stating that "*in order to build an unified, open, competitive and orderly government procurement market system and encourage fair competition in government procurement* [...], *in accordance with law, government procurements shall give equal treatment to products domestically produced in China (including the services provided) by local and foreign enterprises*"[832]. The notice also stated that "*as regards products produced in China, no matter if the supplier is a*

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831 Draft GPL Revision, Art. 23.

832 See Notice on implementing policies on equal treatment of domestic and foreign enterprises in government procurement activities, available at: http://gks.mof.gov.cn/guizhangzhidu/202110/t20211020_3759590.htm (accessed on 19 June 2023).

domestic or a foreign invested enterprise, its right to participate equally in government procurement activities shall be guaranteed".

In 2021, MOF also announced that all procurement by public hospitals is to be considered 'government procurement' and thus implying that, in accordance with the GPL, public hospitals must preferably buy medical devices manufactured in China[833].

Distortions in the Chinese government procurement market affect not only foreign bidders, but also domestic providers. One of the goals of the Government is to favour key Chinese enterprises - the '*national champions*' - in the government procurement process[834]. Such measures represent an explicit discrimination not only against foreign companies, but also against non-key domestic providers, and show that government procurement process often operate against market-based rules, by pursuing other secondary goals.

7.3.1.2. Lack of Clear Definition of 'Domestic' Good or Company

While there is a preference for domestic products, construction and services in the GPL, there is no clear definition of what is actually meant by 'domestic' good/construction/service or company. A draft of the IRGPL issued in 2010 for public comments defined '*domestic goods, construction, and services'* as *'made within China's borders and for which domestic manufacturing costs exceed a certain percentage of the final price*'[835] and set this percentage at 50%. However, this was removed from the final version of the IRGPL to avoid controversy with the consulted parties which were opposing this criterion. As a result, as of writing of this Report, this definition is still missing. Similarly, the IRGPL do not make the distinction between local or foreign suppliers. Article 20 explicitly states that all bidders should be treated equally.

In the framework of the ongoing revision of the GPL, China has communicated the intention to define domestic goods/construction/services. However, as of writing of this Report, there is no draft definition yet.

An exact definition of 'domestic' good or company is crucial to allow foreign bidders – especially Foreign Invested Enterprises ('*FIEs*') in China – to know whether the goods and companies they plan to include in their bids would qualify for consideration. Furthermore, the lack of an unambiguous definition leaves room for interpretation by the procuring entities, which might result in discriminating in favour of domestic suppliers.

7.3.1.3. Substantial Discretion in Pursuing Secondary Policy Goals

The GPL and the IRGPL liaise government procurement actions to the achievement of national policy goals.

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833 European Chamber of Commerce in China, *European Business in China Position paper*, 2022/2023, p.245 and p.251; available at: https://europeanchamber.oss-cn-beijing.aliyuncs.com/upload/documents/documents/European_Business_in_China_Position_Paper_2022_2023[1068].pdf (accessed on 19 June 2023).

834 Covington & Burling LLP, (2014). *Measures and Practices Restraining Foreign Investment in China,* prepared for the European Commission Directorate-General for Trade, 10 August 2014, p. 39.

835 *State Council of Legislative Affairs Office of State Council calls for comments on the Draft Implementing Regulations on GPL*, Legislative Affairs Office of State Council PR China, 11th January 2010.

For instance, Article 9 of the GPL stipulates that *"government procurement shall be conducted in such a manner as to facilitate achievement of the goals designed by State policies for economic and social development, including but not limited to environmental protection, assistance to underdeveloped or ethnic minority areas, and promotion of the growth of small and medium-sized enterprises."*

Similarly, Article 8 of the Draft GPL Revision provides that "*government procurement shall help achieve sustainable economic and social development goals, including maintaining national security, supporting scientific and technological innovation, boosting the development of small and medium-sized enterprises, supporting green development, providing support to underdeveloped areas and ethnic minority areas, protecting the interests of disadvantaged and vulnerable groups, etc.*", explicitly mentioning additional policy goals concerning economic and social development, including with respect to national security, scientific and technological innovation, green development and protecting vulnerable groups[836].

In addition, Article 6 of the IRGPL states that: "*The State Council Finance Department shall, in accordance with the national economic and social development policies, together with other relevant departments of the State Council, set out government procurement policies, using measures such as formulating criteria applicable to procurement needs, setting aside shares of procurements, adopting preferential price evaluation policies, conducting priority procurement, so as to achieve the objectives of energy saving, environmental protection, support to the development of less-developed regions and ethnic minority regions, promotion of the development of small and medium-sized enterprises, etc.*"

The generic references made in both pieces of legislation to the achievement of national goals, without delineating a finite list, leaves *de facto* substantial discretion to the procuring entities in choosing among different candidates and offers to public tenders.

In other words, on top of the '*Buy Chinese*' policy set out in the GPL, the IRGPL introduce additional potential distortions by allowing the procurement entities to pursue a broad (and ultimately undefined) range of policy goals and favour domestic providers. While some of these policies may pursue widely shared goals such as the protection of the environment, the provisions leave considerable discretion to the procuring entities to also consider other goals set by the Government (e.g. in the development plans, including FYPs and Made in China 2025)[837].

As an example of a plan that sets goals which procuring agencies may pursue, Civil Aviation Administration of China ('*CAAC*'), NDRC, and Ministry of Transport issued the 14th FYP for Civil Aviation in 2021[838]. Chapter 20 of this plan provides that China "*needs to strengthen R&D of key technologies", "promote the application of independent innovation" and "accelerate the application of domestic technologies and equipment*"[839]. Similarly, the 14th FYP for the

836 Draft GPL Revision, Art. 8.

837 The goals in the development plans and FYPs are extensively discussed in the dedicated chapters of this Report, in particular Chapter 4.

838 CAAC, NDRC, and Ministry of Transport. (2021). *14th FYP for Civil Aviation*, available at: http://www.gov.cn/zhengce/zhengceku/2022-01/07/content_5667003.htm (accessed on 19 June 2023).

839 *Ibid.*, pp. 52-55.

Medical Equipment Industry Development (2021-2025)[840] provides that *"local governments, industrial funds and social resources will be guided to support the breakthroughs of medical-industry collaboration in developing medical equipment, key parts and basic materials, and financial investment in the transformation and industrialization of breakthroughs. We shall further strengthen the government procurement management and support the medical equipment industry development"*.

State planners' localisation demands and the push for dominance of indigenous technology is also impacting public, and even private, procurement of network equipment and telecommunications services. One of the most blatant examples is the '3-5-2' policy, a directive released in 2019 by the PRC Chamber of Commerce, under which the use of foreign hardware and software is to be reduced in Chinese government offices by 30% in two years, 50% in four, and the remaining 20% in six[841].

7.3.1.4. Distortions Associated with Procurement by SOEs

Although procurement by SOEs is not deemed government procurement under China's laws as of writing of this Report, some of China's SOEs act like arms of the Chinese government, and their procurement can offer prominent examples of discrimination against foreign companies. For example, in 2014 the China Railway Group launched tenders for the supply of 232 high-speed trains to only domestic companies[842]. In the aviation sector, China's three largest airlines – Air China, China Southern Airlines and China Eastern Airlines, all of them are SOEs – are required to follow the instructions of, or at least give consideration to, the Government's recommendations on purchasing domestically produced aircraft, as the purchase must be approved by CAAC[843]. Indeed, public bodies have been active in lobbying for airlines to purchase domestically produced aircraft in order to promote the development of China's civil aviation industry. For instance, at the 2020 Shanghai-Henan Cooperation and Exchange Conference, an event that was promoted by the governments of these two regions, the main domestic manufacturers for large civil aircraft, Commercial Aircraft Corporation of China, Ltd. ('*COMAC*') and Henan Civil Aviation Development & Investment Co. Ltd.[844] signed an MoU for the purchase of 50 COMAC aircraft. In addition, in 2019, CAAC leadership publicly stated

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840 See Chapter IX, Section I of the 14th FYP for the Medical Equipment Industry Development (2021-2025).

841 European Union Chamber of Commerce in China, European Business in China Position Paper 2021/2022, p. 9, available at: https://europeanchamber.oss-cn-beijing.aliyuncs.com/upload/documents/documents/European_Business_in_China_Position_Paper_2021_2022[964].pdf (accessed on 19 June 2023).

842 Barrow, K. (2014), *China issues tenders for 232 high-speed trains*, International Railway Journal, available at: http://www.railjournal.com/index.php/high-speed/china-issues-tenders-for-232-high-speed-trains.html (accessed on 19 June 2023).

843 Juneyao Air (12 September 2018). *Announcement of Juneyao Air on change of certain investments using raised funds* [Press release], p. 8, available at: http://pdf.dfcfw.com/pdf/H2_AN201809111193100713_1.pdf (accessed on 19 June 2023); *See* also Air China (18 March 2021) *Announcement of Air China on Purchase of Aircraft*, available at: https://pdf.dfcfw.com/pdf/H2_AN202103181473312050_1.pdf?1616087314000.pdf (accessed on 19 June 2023).

844 Henan Civil Aviation Development & Investment Co. Ltd. is an SOE mainly responsible for accelerating the development of Henan Province's civil aviation industry as approved by the Henan CCP Provincial Committee and Government.

that it encourages domestic airlines to purchase COMAC aircraft in order to promote the development of China's civil aviation industry[845].

Another example of '*Buy Chinese*' practice may be found in the telecom industry. Major SOEs including China Telecom, China Mobile and China Unicom, have increased purchases of domestic servers since 2020. Between 2020 and 2022, more than a third of new purchases the above-mentioned three companies were servers equipped with domestic chips, suggesting a preference to purchase from domestic suppliers[846].

Examples of foreign companies being prevented from competing fairly with SOEs are also in tendering processes for renewable projects. Most Chinese provinces have implemented competitive tendering processes to determine which projects sponsored by different developers should be included in their annual construction plans, a pre-condition for a project to be approved. Many such tendering rules have a score-based system to measure a developer's 'track record' in the renewable energy industry. However, similar to procurement in construction and other industries, only track records within China can be assessed, with international records currently not being taken into consideration[847].

7.3.1.5 DISCRIMINATIONS AGAINST PROCURED IMPORTED GOODS

Discriminations against procured imported goods (especially also for medical devices) happen through a rigorous application-evaluation-approval procedure for the procurement of imported products; imposing offsets for such procurement, e.g. technology transfer; and a mandatory national/public interests exception clause in the procurement contracts for imported goods.

7.3.1.6 DISTORTIONS DUE TO THE SYSTEM OF VOLUME-BASED PROCUREMENT

Especially in the area of medical devices[848], China uses the system of volume-based procurement ('VBP'), under which it sets very low reference prices for tenders based on volume that do not appear to be market-economy-based. Overall, it is the suspicion that subsidised Chinese companies can afford the low prices, but this is not sustainable for foreign companies.

7.3.2. DISTORTIONS ASSOCIATED WITH THE TBL

Unlike the GPL, the TBL does not explicitly mention any provision in favour of national suppliers. Nonetheless, a number of distortions are generated at the level of basic and secondary laws, as well as in implementation.

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845 CCA Online (28 February 2019). *Feng Zhenglin met with Chairman of COMAC He Dongfeng and his party*; available at: http://www.ccaonline.cn/news/top/501661.html (accessed on 19 June 2023).

846 See Eechi, Z., et al. (23 December 2022). *China's drive to kick the foreign IT habit*. NikkeiAsia; available at: https://asia.nikkei.com/Spotlight/Caixin/China-s-drive-to-kick-the-foreign-IT-habit (accessed 25 April 2023).

847 European Union Chamber of Commerce in China. *European Business in China Position Paper* 2021/2022, p.26; available at: https://europeanchamber.oss-cn-beijing.aliyuncs.com/upload/documents/documents/European_Business_in_China_Position_Paper_2021_2022[964].pdf (accessed on 19 June 2023).

848 The Chinese medical device market reached in 2022 RMB 958 billion, which represents an increase of 19% compared with 2021, accounting for about a quarter of the global device market. See EUCCC Position Paper 2023/2024, available at: https://www.europeanchamber.com.cn/en/publications-position-paper (accessed on 14 November 2023).

7.3.2.1. LICENCE REQUIREMENTS FOR BIDDING AND PROMOTION OF 'INDIGENOUS INNOVATION' THROUGH PUBLIC PROCUREMENT

NDRC, which is the relevant body responsible for the implementation of the TBL, often requires that FIEs obtain a licence in order to participate in bidding procedures in China. This is in line with a broad government goal of promoting '*indigenous innovation*'[849]. For this, central and local governments used to stipulate domestic innovation requirements in public procurement tenders[850].

A study conducted for the Commission on measures restraining foreign investments in China[851] identified dozens of measures relating to government procurement, largely from sub-central governments, that contained at least one restraint in favour of domestic investors or investments over foreign investors or investments.

For example, the accessibility rate of foreign investors to the Chinese rail market, according to the Association of the European Rail Industry ('*UNIFE*'), dramatically fell over the years – from 65% in 2009-2011 to 20% in 2013-2015[852] and 18% in 2015-2017[853] – and has reached, according to the 2020 World Rail Market Study, a record low of 17%[854].

The NDRC requirement to obtain a licence can only be achieved by constituting a JV with a Chinese partner. Although there are no formal rules at the national level, the concerned parties often claim that tenders are only open to local companies or to JVs where the Chinese partner has no less than 50% of the JV's shares[855]. This practice in the rail market and in other industries appears to be persisting, despite the State Council circular number 5 on Promotion of the Opening-up and Active Use of Foreign Investments, introduced in January 2017. The circular states: "*It is vital to deepen government procurement reform, adhere to the principles of openness, transparency and fair competition, treat the products produced by foreign-invested enterprises in Mainland China equally pursuant to laws and regulations, and facilitate Chinese-funded and foreign-invested enterprises to participate in bidding and bid submission for government procurement in a fair manner.*"

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849 State Council (2005). *National Medium- and Long-Term Program for Science and Technology Development (2006-2020)*, Art. 8.3; available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 19 June 2023). See also Draft GPL Revision, Artt. 8, 25.

850 Covington & Burling LLP (2014). *Measures and Practices Restraining Foreign Investment in China,* prepared for the European Commission Directorate-General for Trade, 10 August 2014, p. 37.

851 *Ibid.,* Tables 5 and 7.

852 See UNIFE, *Annual Report 2016*, available at: https://www.unife.org/wp-content/uploads/2021/03/ANNUAL-REPORT-2016-13MB.pdf (accessed on 19 June 2023).

853 See UNIFE, *Annual Report 2018*, p.30, available at: https://www.unife.org/wp-content/uploads/2021/03/Annual-Report-2018.pdf and see UNIFE, Annual Report 2019, p.29, available at: https://www.unife.org/wp-content/uploads/2020/02/nual-Report-2019.pdf (both accessed on 19 June 2023).

854 See UNIFE, *Annual Report 2021*, p.46, available at: https://www.unife.org/wp-content/uploads/2022/03/UNIFE-AR2021_Updated-HQspreads-07022022.pdf and UNIFE, *Annual Report 2020*, p.50, available at: https://www.unife.org/wp-content/uploads/2021/03/ANNUAL-REPORT-2020-UNIFE.pdf (both accessed on 19 June 2023).

855 See UNIFE, *Position Paper Accessibility of China's Rail Market for the European Rail Supply Industry*, July 2016, p. 7.

More recently, MOF emphasized these goals in its 2019 Circular on Promoting the Level Playing Field for Government Procurement to Improve the Business Environment, which included directions to revise regulations and practices that "*hinder fair competition in the field of government procurement*", implement a fair competition review system and enhance the transparency of government procurement more broadly[856].

Finally, several tender invitations provide for exclusion of consortia. For example, in the abovementioned 2014 China Railway Group tenders for high-speed trains consortia were excluded from the bidding[857]. The European Chamber of Commerce in China ('*EUCCC*') points out that bidding requirements could be established to impede bidders that are otherwise qualified but unable to meet unreasonable procurement rules set in the bidding document[858].

7.3.2.2. LACK OF REMEDIES

The GPL introduced a detailed bid challenge and complaint system[859]. This system guarantees to the bidders three grades of complaints to ensure their right of defence (i.e. to the procuring entity, to the department for supervision of government procurement and to the People's Court). It sets forth a streamlined procedure and criteria that complainants and complaints have to meet in order to be eligible. The Implementing Regulations of the GPL further develop the framework by streamlining the procedures relating to the available remedies[860]. The Draft GPL Revision generally maintains the same complaint system but adds that suppliers to government procurement contracts may directly file lawsuits if they believe that the conduct of the procuring entities or procurement intermediaries infringes on their legal rights and interests[861].

By contrast, the TBL remains quite general on the complaint system. The only reference to complaints is made under the supplementary provisions in Article 65: *"A bidder or any other interested person has the right to raise his objections to the tenderer or to file a complaint with the relevant administrative supervision department if he believes that the bidding and tendering activities do not comply with the relevant provisions of this Law."*

The TBL does not provide procedures or remedies for loss or damage to the aggrieved tenderer, but subsequent Implementing Regulation[862] clarified that the ultimate body to handle

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856 MOF (2019). *Circular on Promoting the Level Playing Field for Government Procurement to Improve the Business Environment*, Art. 1, available at: http://www.gov.cn/xinwen/2019-07/30/content_5417344.htm (accessed on 19 June 2023).

857 Barrow, K. (2014). *China issues tenders for 232 high-speed trains*. International Railway Journal; available at: http://www.railjournal.com/index.php/high-speed/china-issues-tenders-for-232-high-speed-trains.html (accessed on 19 June 2023).

858 European Union Chamber of Commerce in China. *European Business in China Position Paper* 2021/2022, p.144, available at: https://europeanchamber.oss-cn-beijing.aliyuncs.com/upload/documents/documents/European_Business_in_China_Position_Paper_2021_2022[964].pdf (accessed on 19 June 2023).

859 See GPL Chapter VI (articles 51 to 58).

860 See Implementation Rules of the GPL (Chapter VI, Articles 52 to 58).

861 Draft GPL Revision, Art. 93.

862 *Inter alia*, the Measure on Handling the Complaints of Bidding for Construction Projects by NDRC, Ministry of Construction, Ministry of Railway, Ministry of Communications, Ministry of Information Industry, Ministry of Water Resource, and CAAC, issued and effective since 1 August 2004.

complaints on bidding activities is the NDRC, which will not accept the case if other regulatory authorities have already accepted the complaint.

Therefore, under the TBL complainants cannot claim for compensation. The rationale behind the lack of remedies in the TBL was that the aggrieved tenderers could refer to the existing administrative rules, at each level of the public administration. However, unlike the GPL, procurement under TBL covers a wide array of procuring entities (SOEs, ministries, local or central authorities). Hence the processes and the supervision authorities can differ. This means that a company that wants to lodge a complaint shall refer each time to a different body or complaint process.

This complexity could have a dissuasive effect on suppliers, especially foreigners, in bidding under the TBL.

7.3.3. OTHER EXAMPLES OF DISTORTIONS

The Business Confidence Survey 2022, conducted by the EUCCC, indicated that 21% of responded European companies experienced differentiated treatment in public procurement. The respondents reported that their local competitors are given tender details ahead of time, allowing them to assemble a highly competitive bid by the submission deadline[863].

This is a key challenge for companies operating in the medical devices, civil engineering, and IT and telecommunications sectors[864]. Below are outlined certain examples of distortions observed across a number of sectors.

- *Medical Equipment*: In implementing Made in China 2025 (see Section 4.2.3), China sets out government-designated domestic market share targets for a number of strategic sectors. In the case of medical devices, China set a target of 85% domestic market share for Chinese companies producing '*core medical device components*' by 2025. In order to achieve these targets, China has notably been utilizing market-distorting measures and practices linked to localization and technology transfer, as well as volume-based procurement. For medical devices, 2016 State Council Guiding Opinion[865] further stipulates that "[i]*f domestic drugs and medical devices can meet the requirements, the government procurement project must purchase domestic products in principle, and gradually improve the level of domestic equipment in public medical institutions*". Furthermore, in May 2021 MOF and MIIT jointly distributed 'Notice 551'[866] to procuring authorities and selected Chinese companies but have never made it public. The notice 551 sets domestic product procurement requirement of up to 100% for many categories of medical devices across China (it imposes domestic product requirements for the procurement of 178 categories of medical devices across

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863 European Union Chamber of Commerce in China, *European Business in China Position Paper* 2022/2023, p. 97-98, available at: https://www.europeanchamber.com.cn/en/publications-archive/1068/European_Business_in_China_Position_Paper_2022_2023 (accessed on 1 June 2023).

864 *Ibid*.

865 See Art. 13 of the State Council Guiding Opinion on promoting the sound development of medical industry; available at: https://www.gov.cn/zhengce/content/2016-03/11/content_5052267.htm (accessed on 20 November 2023).

866 Available at : https://www.cgwenjian.com/view/industry/20211011000018410l?zt_id_from=54 (accessed on 20 November 2023).

China, and for 137 of these categories 100 percent of the products procured must be domestic).

Moreover, in 2020, the Health Commission of Guangdong Province published an official letter (No. 20200567) to restrict local hospitals' access to foreign medical equipment and encourage them to buy domestic branded medical equipment, but the Shanghai Municipal Charity Foundation and the Red Cross Society purchased several computed tomography devices from a local manufacturer without having an open procurement process to allow all computed tomography's manufacturers to compete[867].

The increasing emphasis on local and state-oriented procurement for medical devices has only increased in recent years. The shift to centralised state procurement in medical technology products, including by mandating significant price cuts in the procurement market, turned a EUR 1.3 billion trade deficit for China in 2019 into a EUR 5.2 billion surplus just one year later[868]. As an example of a recent policy, MOF and MIIT secretly circulated in 2021 the Auditing Guidelines for Government Procurement of Imported Products to local finance and industry and information authorities, which required a wide range of medical equipment to be procured by hospitals domestically, with 137 goods needing to be procured only from local sources[869].

- *Airline Industry*: Distortions can be found in both airline ticketing and aircraft manufacturing. First, the European industry pointed out the existence of an explicit barrier against FIEs bidding for contracts for supplying tickets to government personnel travelling on business[870], whereas on 14 April 2014, MOF and CAAC issued the Notice on Strengthening Official Air-ticket Purchases which explicitly stipulates the '*principle of development of national airlines'* (Article 1). This translates into the obligation to give precedence to domestic airliners when purchasing tickets for business purposes to any category of staff in all levels of public institutions in China, or when purchasing commercial tickets using fiscal funds. Moreover, Article 3 obliges the officials which are not in a position to choose a national carrier, to submit an approval form to "*take non-domestic*

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867 European Union Chamber of Commerce in China, *European Business in China Position Paper 2021/2022*, p.253, available at: https://europeanchamber.oss-cn-beijing.aliyuncs.com/upload/documents/documents/European_Business_in_China_Position_Paper_2021_2022[964].pdf (accessed on 19 June 2023).

868 Erixon, F., Guinea, O., and Guildea, A. (2022). *When the State Becomes the Only Buyer: Monopsony in China's Public Procurement of Medical Technology*, p. 4. European Centre for International Political Economy; available at: https://ecipe.org/wp-content/uploads/2022/03/ECI_22_PolicyBrief_Monopsony_04_2022_LY07.pdf (accessed on 19 June 2023).

869 See The Medical Device Distributors Alliance (10 November 2021). *The MOF's guidelines for the review of imported products: 137 kinds of medical devices are all purchased domestically*; available at: https://www.cgwenjian.com/view/industry/20211011000018410l?zt_id_from=54 (accessed on 19 June 2023).

870 See European Union Chamber of Commerce in China, *European Business in China Position Paper 2014/2015*, pp. 97, available at: https://www.eusmecentre.org.cn/sites/default/files/European%20Business%20in%20China%20Position%20Paper%202015-2016_en.pdf (accessed on 19 June 2023).

airline flights and change the transit" to the relevant foreign affairs and financial departments.

With respect to aircraft manufacturing, the USTR observed in its 2018 investigation into Chinese trade practices that the government can use its leverage due to the significant size of the country's commercial aircraft market to "*foster the development of a domestic supply chain for Chinese-made aircraft*"[871]. The report stated that "*purchases of commercial aircraft by China's state-owned airlines require approval by the Chinese government,*" which gives the Government additional control over the procurement process[872]. As an example, the report noted that COMAC requires foreign suppliers of C919 aircraft to enter into JVs with Chinese suppliers in order to participate in the tendering process.

- *Solar*: In a 2021 report, the European Council on Foreign Relations stated that while China has officially encouraged foreign participation in the solar power sector since 2011, such participation is "*constrained by a strong informal preference for local players in public procurement, which has resulted in a nearly 100 per cent market share for domestic firms*"[873]. The report explained that the barriers are "*principally in the form of a strong preference for domestic firms over foreign ones*" due to the procurement process being driven by state entities that are incentivised to favour local players[874].
- *Innovation products*[875]: The State Council issued the *Opinions on Promoting the High-quality Development of Innovation and Entrepreneurship and Creating an Upgraded Version of 'Mass Innovation and Entrepreneurship'* on 18 September 2018, which required that government procurement policies be improved to support innovation and SMEs and to focus on increasing efforts to procure major innovative products and services as well as key technologies. The opinions also stated that NDRC, MOF, MIIT, Ministry of Science and Technology (*'MOST'*) and local governments have authority to update the policies and measures.
- *Wind power equipment:* In 2006, the Management Measures for National Indigenous Innovation Product Accreditation stated that products made with Chinese intellectual property could qualify for priority in government procurement. While the Government officially ended this practice in December 2011, the European Commission reports that the

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871 US Trade Representative (2018). *Findings of the investigation into China's acts, policies and practices related to technology transfer, intellectual property and innovation under Section 301 of the Trade Act of 1974*, p. 34, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed on 19 June 2023).

872 *Ibid.*, p. 33.

873 Kratz, A., Oertel J. (2021). *Home advantage: How China's protected market threatens Europe's economic power*, p. 11, European Council on Foreign Relations, available at: https://ecfr.eu/wp-content/uploads/Home-advantage-How-Chinas-protected-market-threatens-Europes-economic-power.pdf (accessed on 19 June 2023).

874 *Ibid.*, p. 22.

875 State Council (2018). *Opinions on Promoting High-quality Development of Innovation and Entrepreneurship and Creating an Upgraded Version of 'Mass Innovation and Entrepreneurship'*, available at: http://www.gov.cn/zhengce/content/2018-09/26/content_5325472.htm (accessed on 19 June 2023).

policy change did not apply to purchases made by China's SOEs, which controlled a significant part of the market[876].

- *Rail:* The European Council on Foreign Relations observed in a 2021 report that while foreign companies have formally been able to participate in China via JVs for several decades, "*strong informal market barriers have kept their participation very low*"[877]. In particular, China Railway, an SOE, is the main buyer of rolling stock in the country and has "*ended to favour home players in its procurement processes*"[878]. The report noted that China's main rolling stock manufacturer accounts for 86% of the country's total rolling stock market volume as well as almost 100% of the high-speed rail rolling stock market.
- *Automotive:* MIIT released a preliminary list for official government automotive fleet purchases on 24 February 2012, which only included local Chinese car brands[879]. In 2014, MOF, MOST, MIIT, NDRC and the National Government Offices Administration jointly issued a notice[880] stipulating that government organs and public institutions should prioritize new energy vehicles when purchasing vehicles and must choose new energy vehicles from *the Catalogue of Recommended Vehicle Models for the Promotion and Use of Fuel-efficient and New-energy Vehicles* when using fiscal funds. This catalogue is updated from time to time, and most of the recommended models are domestic brand vehicles. For a more comprehensive analysis see Chapter 22.
- *Postal and express delivery industry*[881]: The State Postal Bureau issued the *Specifications for Allocating Safety Production Facilities in Postal Industry*, which tightened the compulsory requirements for security measures. As a result, it limited strongly foreign investments in the domestic postal delivery service.
- *Pharmaceuticals*[882]: Since 1998 the NDRC has mandated 28 rounds of price reductions of reimbursement for drugs estimated to have impacted 1 318 types of drugs by an average of 21%. As a practical matter, in accordance with the *National Reimbursement Drug List*, it is often the case that local generic drugs may be fully reimbursed while brand drugs may be only partially reimbursed.

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876 European Commission (2016). *Overview Of Potentially Trade Restrictive Measures Identified Between 2008 And End-2015*, p. 167, available at: https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2017)483&lang=en (accessed on 19 June 2023).

877 European Council on Foreign Relations (2021). *Home advantage: How China's protected market threatens Europe's economic power*, available at: https://ecfr.eu/wp-content/uploads/Home-advantage-How-Chinas-protected-market-threatens-Europes-economic-power.pdf (accessed on 19 June 2023).

878 *Ibid.*

879 European Commission (2016). *Overview Of Potentially Trade Restrictive Measures Identified Between 2008 And End-2015*, p. 30, available at: https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2017)483&lang=en (accessed on 19 June 2023).

880 MOF, MOST, MIIT, NDRC & National Government Offices (2014). *Implementation Plan on Procurement of new energy vehicles by Government and Public Institution*, available at: http://www.gov.cn/xinwen/2014-07/13/content_2716565.htm (accessed on 19 June 2023).

881 European Commission Staff Working Document (2016). *Analysis of new potentially trade restrictive measures in the period 1 July 2014 - 31 December 2015*, available at: https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52016SC0204 (accessed on 19 June 2023).

882 See for example at: https://www.pharmaceutical-technology.com/pricing-and-market-access/china-nrdl-foreign-pd1-inhibitors/ (accessed on 21 June 2023).

- *Chemical manufacturing*[883]: NDRC issued in 2005 the Urgent Notice Regarding the Orderly and Healthy Development of the Oil Refining and Ethylene Industry[884]. Article 4 states: "*Large petrochemical installations have been listed as a focus area of the State's revitalization of the equipment manufacturing industry. We must actively adopt technologies and domestic equipment that are developed indigenously or that are re-innovated after being imported, digested, and absorbed, strengthening the capability of indigenous innovation and system integration.*"

7.4. CHAPTER SUMMARY

The total value of the public procurement market in China, consisting of tenders issued by Chinese central and local governments regulated under GPL, is estimated to represent 3.3% of China's GDP. When including sales to SOEs, the value of the central government procurement market was estimated to be USD 2.15 trillion from 2019 to June 2020 (see Section 7.2). Public procurement is subject to two main pieces of legislation, the GPL and the TBL and their respective implementing regulations. The GPL, effective since 2003, applies to government procurement for goods, construction and services conducted with fiscal funds at all administrative levels above certain thresholds. The GPL does not apply to SOEs. The TBL, effective since 2000, governs procurement activities of both fiscal and private entities (including SOE's) relating to large infrastructure and public utility projects. These projects can be financed totally or, in part, by the government, state financing, loans and aid funds from international organisations or foreign governments. Draft revisions to both the GPL and the TBL have been released for public comments in 2019 and 2022 respectively but, as of writing of this report, have yet to be finalized (see Section 7.1.2).

In some respects, allocation of contracts under existing rules is not always transparent, done in a competitive way or based on market rules. Preferential treatment of domestic over foreign enterprises is enshrined in the GPL where the *'Buy Chinese'* provisions are explicitly set out. Ensuing distortions, as a result of limiting the competitive field, can manifest themselves through higher award prices or a limited range of goods and services on offer. These restrictive practices can be further compounded by discrimination in favour of 'national champions' as expressed in a 2008 MOFCOM notice regarding the protection and promotion of famous brands. While the TBL does not explicitly require *'Buy Chinese'*, certain practices including licencing requirements, preferences for holders of indigenous patents as well as exclusions of consortia, in fact skew the process in favour of Chinese enterprises. Such practices are prevalent in sectors including energy, construction and engineering.

The pursuit of secondary policy goals through the public procurement process further undermines market-based principles in the area. The legislation specifically provides that public procurement shall be conducted in order to facilitate the achievement of goals designed by state policies (see Section 7.3). Given the undefined nature of these goals, there is broad scope for

interpretation by the decision-making bodies in justifying the allocation of contracts, thus overriding market driven decisions.

Ambiguities regarding the definition of domestic goods, services and construction works and domestic enterprises (e.g. whether they include FIEs), a lack of clear or effective remedial systems for challenges and complaints, overlaps and opaque provisions existing in both sets of relevant governing legislation all serve as further deterrents to foreign suppliers bidding for public procurement contracts in China (see Section 7.3).

Given the value of procurement contracts in China, the absence of clear competitive market-based rules has a significant distortive effect.

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8.1. INTRODUCTION

Since 1978, when China adopted its '*reform and opening-up*' policy, China's leadership has repeatedly expressed its intention to liberalise market access for domestic and foreign investment, replacing the highly centralised investment management system associated with China's former planned economy with a more market-oriented investment regime. Although there has been progress liberalising some aspects of the economy, significant barriers remain for domestic and foreign investment. In particular, China's leadership continues to regulate investment (in order to guide investment flows to favoured sectors based on the central economic planning.

Restrictions and controls on investment are implemented at all levels of government in China and affect both domestic and foreign investment. Central, provincial and local governments play pivotal roles in determining the destination, sector and scale of state-financed investment, as well as private investment[885] in China. A system for controlling outbound direct investment (ODI) is also in place, under the authority of MOFCOM and NDRC. Chinese policymakers regulate investment decisions using a complex net of industrial policies that are national and local, cross-sector and industry-specific and short-, medium- and long-term.

The government employs a broad toolkit to advance its industrial policy goals. These tools include laws, regulations and investment approval processes that apply varying treatment and levels of regulatory scrutiny depending on the nature of the investor and the proposed investment. By employing incentives, restrictions and prohibitions related to investment, the Chinese government maintains considerable control over the country's economy and actively seeks to counter market forces or to alter the terrain for (or '*guide*') market forces.

The main government agencies involved in the regulation of private investment in China are:

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885 The use of the term '*private investment*' in this chapter primarily refers to investments made by private domestic investors and private foreign investors. Depending on the circumstances, investments by state-owned enterprises may or may not be subject to the same written rules or rules as they apply in practice.

- NDRC (together with provincial and local development and reform commissions (*'DRCs'*)) which oversees China's economic development and industrial policy framework, conducts project approvals for certain investment projects and regulates certain foreign investment-related matters;
- MOFCOM (together with provincial and local commerce departments) which regulates certain foreign investment-related matters such as the foreign investment security review (together with NDRC)[886];
- SAMR (together with provincial and local administrations for market regulation (*'AMRs'*)) which is responsible for the registration of enterprises and anti-trust reviews and enforcement[887];
- various industry regulators which regulate and grant licenses for activities in specific industries (e.g. MIIT which regulates and issues licenses for the telecommunications and information technology sectors, among others[888]).

This chapter's second section takes a look at the system of laws, regulations and policies that China uses to lay out and effectuate the country's industrial and economic policies with respect to investment, both at a high level and, often, in very detailed form, impacting opportunities and outcomes in China for domestic and foreign investors.

The third section describes the approval process for private investment, both domestic and foreign, which serves as a vehicle for the government to micromanage the country's economy in line with its industrial and economic development policies, particularly in sectors it considers to be of strategic importance.

8.2. Industrial Policy Prescriptions in Laws, Regulations and Policy Documents that Impact Investment Decisions

China endeavours to use its industrial and economic policies to regulate and channel foreign and domestic investment flows towards its policy goals and strategic ambitions. The Government implements its investment policies through laws, regulations and administrative approval processes, including the approval process for private investment.

In May 2020, China formally embraced a new framing of the country's economic policy, the so-called '*dual circulation*' strategy (see Section 2.3.2), which was first mentioned by President Xi at the 7th session of the Central Financial and Economic Affairs Committee in April 2020[889].

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886 NDRC and MOFCOM. (2020). *Measures for the Security Review of Foreign Investment*. https://www.gov.cn/gongbao/content/2021/content_5582626.htm (accessed on 7 November 2022).

887 General Office of the CPC Central Committee and General Office of the State Council. (2018). *Provisions on Functional Configuration, Internal Organizations and Staffing of the State Administration for Market Regulation*, Article 3. http://www.gov.cn/zhengce/2018-09/10/content_5320813.htm (accessed on 8 November 2022); *see* also State Administration for Market Regulation. *Responsibilities of SAMR*. https://www.samr.gov.cn/jg/ (accessed on 7 November 2022).

888 General Office of the State Council. (2008). *Provisions on Major Functions, Internal Organizations, and Staffing of MIIT*, Article 2. http://www.gov.cn/fuwu/2014-02/22/content_2618642.htm (accessed on 23 November 2022).

889 See Xinhua News Agency. (2022, February 19). *Developing new paths in promoting high-quality development' - commentary 7 on 'ten clarifications' which highlights the new leap of Marxism in Sinicization*. http://www.gov.cn/xinwen/2022-02/19/content_5674696.htm (accessed on 7 November 2022).

The '*dual circulation*' strategy was subsequently enshrined in the 14th FYP' (see Section 2.2.5) and has guided reforms and policy makers across economic policy domains, including the regulation of domestic and foreign investment.

The 14th FYP notes the fundamental role of consumption in driving economic development and the key role of investment in optimizing the supply structure and calls for building "*a strong domestic market with copious demand for consumption and investment*"[890].

This section further examines three overarching interrelated goals that characterize Chinese investment policy. Sub-section 8.2.1 looks at how investment policy and corresponding laws and regulations serve as a vehicle for maintaining control over the economy, particularly in key sectors. Sub-section 8.2.2 examines elements of China's investment policy aimed at bolstering domestic industry capabilities. Sub-section 8.2.3 considers how investment policy is geared towards selectively utilizing foreign investment in service of state priorities.

8.2.1. Goal: Maintaining Control Over Key Industry Sectors

Under China's centralised socialist market economy, private ownership does not mean autonomy from the State[891] (see Section 3.3.2). In fact, the Government and the CCP are increasingly looking to strengthen their leadership and control of China's growing private sector[892] (see Section 2.2.5). This is a recent development, following decades of gradual liberalisation, and can be considered as an attempt to buttress a renewed emphasis on state-managed industrial policy, managed trade and address emerging challenges and risks, as the scale of private enterprises has expanded and private business leaders have more diverse values and interests.

As mentioned in Sections 2.2.5 and 3.3.2, the 2020 Guideline on Strengthening the United Front Work of the Private Economy in the New Era[893] (see also Sections 2.2.5 and 3.3.2), called on the United Front Work Department[894] to increase the CCP's ideological work and influence in the private sector. In particular, the policy intends to "*increase political and ideological guidance*", to "*continue to build the foundation for the ideological and political work of private economy practitioners*" and to "*build a team of high-quality and responsible private economy*

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890 See the 14th FYP, Article XIV.

891 For the CCP and state control over China's privately-owned enterprises in general, see, e.g., Milhaupt, C. J.; Zheng, W. (2015). Beyond ownership: State capitalism and the Chinese firm. *Georgetown Law Journal, 103*. https://scholarship.law.ufl.edu/cgi/viewcontent.cgi?article=1693&context=facultypub (accessed on 7 November 2022).

892 See, for example, Buckley, C.; Bradsher, K. (2020, September 17). *China's communists to private business: You heed us, we'll help you*. New York Times. https://www.nytimes.com/2020/09/17/business/china-communist-private-business.html (accessed on 7 November 2022); *see also* Xinhua Net. (2020, September 16). *Xi focus: Xi Stresses promoting healthy development of private sector*; available at: .http://www.xinhuanet.com/english/2020-09/16/c_139373545.htm (accessed on 7 November 2022).

893 Central Committee of the Communist Party of China. (2020, September 15). *Opinion on Strengthening the United Front Work of the Private Economy in the New Era*. http://www.gov.cn/zhengce/2020-09/15/content_5543685.htm (accessed on 7 November 2022).

894 An umbrella organization that aims to increase the Party's influence and control both domestically and internationally and reports directly to the Central Committee of the CCP.

representatives with the aim of improving quality, optimizing structures, and playing a key role in the economy"[895].

The State maintains control over key or otherwise sensitive industry sectors using a range of policy tools. As one aspect of its control, it carefully regulates private investment activity in key sectors – through an array of restrictions, prohibitions and incentives that operate both pre-establishment and post-establishment – to ensure that firms under effective government control, including SOEs, maintain their market dominance.

The emphasis on the dominance of the state-owned economy is clearly stated in key texts and the pronouncements of the country's leaders (see Chapter 2). Although recent decades have seen an expansion in the space afforded to private capital, the pendulum seems to have swung towards a reemphasis on the role of state-owned capital in the economy in recent years under President Xi's leadership. This is especially the case in sectors of importance for national security or other strategic reasons[896].

According to SASAC, these "*important industries and key sectors*" include the following seven industries: *(i)* military and defence, *(ii)* power infrastructure, *(iii)* petroleum and petrochemicals, *(iv)* telecommunications, *(v)* coal, *(vi)* civil aviation and *(vii)* shipping. In these seven industries and sectors, Chinese policy is to maintain '*absolute control*'[897]. Moreover, SASAC has made clear that it is government policy to maintain '*relatively strong control*' over the major backbone enterprises of nine additional '*basic and pillar industries*', which are *(i)* equipment manufacturing, *(ii)* automobiles, *(iii)* electronic information, *(iv)* construction, *(v)* steel, *(vi)* non-ferrous metals, *(vii)* chemicals, *(viii)* survey and design and *(ix)* science and technology[898]. What is more, SASAC has made clear that Chinese policy is to maintain '*necessary influence*' in more general areas and sectors including trade, investment, pharmaceuticals, building materials and agriculture[899] (see Section 5.5).

Beyond the substantial role of state-ownership in the Chinese economy, the country's leaders also utilise a diverse set of regulatory instruments to manage investment. These include national

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895 See also Livingston, S. (2020). *The Chinese Communist Party targets the private sector*. CSIS (providing also full translation of the Opinion); available at: https://www.csis.org/analysis/chinese-communist-party-targets-private-sector (accessed on 7 November 2022).

896 See Xinhua News Agency. (2014). *Xi Jinping presided over the fourth meeting of the Central Leading Group for Comprehensively Deepening Reform*. http://www.gov.cn/xinwen/2014-08/18/content_2736451.htm (accessed on 7 November 2022) (unofficial translation). Note that these are not new ideas, even if they are receiving renewed emphasis. For instance, SASAC in 2006 urged managers of state-owned capital to concentrate on the *'important industries and key sectors that are vital to national security and the lifeline of the national economy'* (unofficial translation), see Xinhua News Agency (2006) - *SASAC: The State-owned economy should maintain absolute control over seven industries;* available at: https://www.gov.cn/jrzg/2006-12/18/content_472256.htm (accessed on 28 August 2023).

897 See Xinhua News Agency. (2006, December 18). *SASAC: The State-owned economy should maintain absolute control over seven industries*. https://www.gov.cn/jrzg/2006-12/18/content_472256.htm (accessed on 23 November 2022).

898 *Ibid.*

899 *Ibid.*

security reviews[900], foreign investment security reviews[901], cybersecurity reviews[902] and project approval requirements for fixed-asset investments. In Chinese legal texts and policy discourse, national security is a very broad concept covering not only national defense, but also economic security, financial security, cultural security, scientific and technological security, network and information security, resource security and other aspects[903].

The Government also seeks to gain or retain control over and expand support for strategic sectors (see Section 2.3.2) by taking effective control of companies in such sectors, even when not acquiring a majority stake. In 2020 alone, China's SOEs or state-backed funds have taken effective control of over 50 companies, up from around 20 to 30 in 2018 and 2019[904]. In September 2020, for instance, Luoyang Guohong Investment Group, an investment fund backed by the Henan Province city of Luoyang, signed a contract with industrial robot manufacturer Saimo Technology that would make it a controlling shareholder[905]. While the increase in de facto takeovers can partly be explained by the Government's efforts to assist businesses hit by the COVID-19 pandemic, the increase in numbers is likely also related to the Xi administration's strategic decision to increase control over key industries, including semiconductors, wind power and pharmaceuticals, as well as its '*dual circulation*' strategy[906].

8.2.1.1. Market Access Preferential Treatment for SOEs

Many measures granting preferential treatment to SOEs have their effect prior to the establishment of an enterprise, i.e. by prohibiting or restricting the ability of non-SOEs to investment in particular sectors[907].

Discussed in greater detail in Section 8.2.1.2 below, the Catalogue of Investment Projects Subject to Government Approval[908] ('*Project Approval Catalogue*'), a detailed industrial policy document with binding effect through the investment approval process, lists industry sectors

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900 Standing Committee of the NPC. (2015, July 1). *National Security Law of the PRC*. https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3ZTA2NzA4MmY%3D (accessed on 7 November 2022).

901 NDRC and MOFCOM. (2020). *Measures for the Security Review of Foreign Investment*. https://www.gov.cn/gongbao/content/2021/content_5582626.htm (accessed on 7 November 2022).

902 Cyberspace Administration of China, *et al.* (2021). *Measures on Cybersecurity Review*. http://www.gov.cn/zhengce/zhengceku/2022-01/04/content_5666430.htm (accessed on 7 November 2022).

903 Standing Committee of the NPC. (1 July 2015). *National Security Law of the PRC*, Arts. 15–25. https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3ZTA2NzA4MmY%3D (accessed on 7 November 2022).

904 Cho, Y. (2020, November 14). *China's state control of economy grows with 50 backdoor takeovers*. Nikkei Asia. https://asia.nikkei.com/Economy/China-s-state-control-of-economy-grows-with-50-backdoor-takeovers (accessed on 7 November 2022).

905 "*Luoyang Guohong Investment Group received more than 20% of Saimo's outstanding shares—including some held by top leadership* [of Saimo] — *along with nearly 10% of additional voting rights*." See Cho, Y. (2020, November 14). *China's state control of economy grows with 50 backdoor takeovers*. Nikkei Asia. https://asia.nikkei.com/Economy/China-s-state-control-of-economy-grows-with-50-backdoor-takeovers (accessed on 7 November 2022). ('*Top leadership*' should be understood to refer to executives of Saimo.)

906 *Ibid.*

907 Covington & Burling. (2015). *Assessing 'National Treatment' as a Basis for Securing Market Access Under a Comprehensive Agreement on Investment with the PRC*, 23 July 2015, pp. 63-66.

908 State Council. (2016). Catalogue of Investment Projects Subject to Government Approval. http://www.gov.cn/zhengce/content/2016-12/20/content_5150587.htm (accessed on 28 August 2023).

that require project approvals from NDRC or other designated central or local government agencies[909]. Industry sectors listed in the Project Approval Catalogue tend to be key industry sectors in which the state-owned sector plays a prominent role. Further, laws and regulations prohibiting or restricting the activities of private investors (both domestic and foreign) or otherwise benefiting SOEs can be found in cross-industry laws and regulations[910], as well as those focused on specific industries such as telecommunications, national defence, postal services and distribution[911].

8.2.1.2. POST-ESTABLISHMENT PREFERENTIAL TREATMENT FOR SOEs

China's SOEs are widely understood to receive preferential treatment from the Government well after their establishment, thereby enjoying an unfair competitive advantage over other companies[912]. Expectations regarding post-establishment treatment can also impact investment decisions at the pre-establishment stage. According to a 2020 US-China Business Council member survey, a large majority of respondents (77%) either have concrete knowledge of or suspect that SOEs are receiving subsidies or other benefits from the Government[913].

Some of the primary benefits that China's SOEs enjoy include:

- Preferential financing through the banking system, facilitating greater access and/or below-market rates for credit as China's state-owned banks often provide preferential (below-market) loan rates and terms to Chinese SOEs (see Chapter 5).
- Direct government financial support to SOEs (see Chapter 6).
- Land Allocation. SOEs continue to receive land at below market prices, or even for free, for example by means of land use right allocations for projects that fall into the Catalogue of Allocated Lands[914] (see Section 9.4).
- Preferences in government procurement. to support domestic industry, especially SOEs (see Chapter 7).

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909 Designated approval authorities for different types of projects include the State Council, industry-specific regulators, and the local counterparts of these government organs.

910 See e.g. the AML and the Foreign Trade Law.

911 See, e.g., the Announcement of MOFCOM and General Administration of Customs on the Publication of the Catalogue of Goods under Export License Administration (2023); available at: http://file.mofcom.gov.cn/article/zcfb/zcdwmy/202212/20221203376706.shtml (accessed on 28 August 2023) or the *Opinion of Guangdong Provincial Government on Implementation of Decisions of State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries (2011)*. https://www.gd.gov.cn/zwgk/gongbao/2011/22/content/post_3363219.html (accessed on 28 August 2023).

912 See, e.g., García-Herrero, A.; Ng, G. (2021). *China's State-Owned enterprises and competitive neutrality. Bruegel Policy Contribution*, No. 05/21, § 5.1. https://www.bruegel.org/sites/default/files/wp-content/uploads/2021/02/PC-05-2021.pdf (accessed on 7 November 2022); Covington & Burling. (2015). *Assessing 'National Treatment' as a Basis for Securing Market Access Under a Comprehensive Agreement on Investment with the PRC*, 23 July 2015, pp. 67-69.

913 US-China Business Council. (2020). Member Survey. https://www.uschina.org/sites/default/files/uscbc_member_survey_2020.pdf (accessed on 17 October 2023).

914 Ministry of Land and Resources. (2001). Catalogue of Allocated Lands. https://www.gov.cn/gongbao/content/2002/content_61572.htm (accessed on 31 August 2023).

SOEs also receive a measure of protection from antitrust laws and enforcement. China's enforcement of the Anti-Monopoly Law[915] (*'AML'*), for instance, singles out SOEs for special and favourable treatment[916]. Article 8 of the AML, revised in 2022, states that "[f]*or industries in which State-owned economy dominates and that are vital to the national economy and national security* [...] *the State protects the lawful business activities of the undertakings in those industries and conducts supervision and regulation of their business activities and the prices of their goods and services in accordance with law, so as to safeguard consumers' interests and promote technological progress*"[917].

There have been few AML enforcement cases against big SOEs, indicating weak enforcement of the AML against big SOEs[918]. According to the Office of the USTR[919]:

> *While Chinese regulatory authorities have clarified that the Anti-monopoly Law does apply to state-owned enterprises, to date they have brought enforcement actions primarily against provincial government-level state-owned enterprises, rather than central government-level state-owned enterprises under the supervision of SASAC. In addition, provisions in the Anti-monopoly Law protect the lawful operations of state-owned enterprises and government monopolies in industries deemed nationally important. Many US companies have cited selective enforcement of the Anti-monopoly Law against foreign companies seeking to do business in China as a major concern, and they have highlighted the limited enforcement of this law against state-owned enterprises.*

Another related concern involves state-directed mergers of SOEs, which could provide the merged company with excessive market power that can be used in an anti-competitive manner in China and in markets around the world[920] (see Section 5.5).

8.2.2. Goal: Advancing the Capabilities of Domestic Industry

Beyond seeking to shore up the strength of the SOE sector in key industries, a central goal of Chinese economic policy is to advance the capabilities of domestic industries overall, including those of private domestic industry. In recent years, two key themes that have risen to prominence in this regard are: *(i)* fostering indigenous innovation capabilities[921] and

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915 Available e.g. at: https://www.chinalawtranslate.com/en/anti-monopoly-law-2022/ (accessed on 31 August 2023).

916 US State Department. (2022). *2022 investment climate statements: China*. https://www.state.gov/reports/2022-investment-climate-statements/china/ (accessed on 7 November 2022).

917 Standing Committee of the NPC. (2022). *Anti-Monopoly Law of the PRC*, Article 8. https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE4MjM0Y2NiNTAxODI5ZjQ2YzZhYzJhNWE%3D (accessed on 28 August 2023) (unofficial translation).

918 See Chen, H.; Whalley, J. (2014). The State-Owned enterprises issue in China's prospective trade negotiations. *CIGI Papers*, No. 48, pp. 3–4.

919 United States Trade Representative. (2021). *2021 report to Congress on China's WTO compliance*. https://ustr.gov/sites/default/files/files/Press/Reports/2021USTR%20ReportCongressChinaWTO.pdf (accessed on 7 November 2022).

920 *Ibid.*

921 Zhifeng. L. (2021, March 26). *Improving enterprises' indigenous innovation capabilities*. QS Theory. http://www.qstheory.cn/dukan/hqwg/2021-03/26/c_1127258668.htm (accessed on 7 November 2022).

(ii) promoting domestic champion companies[922]. Advancing domestic industry also involves a third theme related to the trimming or restructuring industries that have outlived or outgrown their purpose. These goals are furthered by China's approach to investment scrutiny, as will be described in more detail below.

8.2.2.1. SEEKING TO FOSTER INDIGENOUS INNOVATION

A key focus of recent industrial policies, including the 14th FYP, has been to improve the Chinese economy's capacity for innovation[923]. This theme can be seen manifested throughout Chinese industrial policymaking, perhaps most notably in policies relating to the information technology industry.

In the mid-2000s, when Chinese policymakers once again began to embrace industrial policy planning after years of diminished emphasis, the Government issued the National Medium- and Long-Term Science and Technology Development Plan (2006-2020) ('*S&T MLP*'). Subsequently, in June 2019, the Ministry of Science and Technology began developing the 2021-2035 National Medium- and Long-term Science and Technology Development Plan[924].

In the 14th FYP, China made the following statement: "[China will] *adhere to the core position of innovation in China's overall modernization, have science and technology self-reliance and self-improvement as strategic support for national development, and be oriented toward the world's cutting edge in science and technology, toward the main economic battlefields, toward the nation's major needs, and toward the lives and health of the people*. [China will] *deeply implement the strategy of reinvigorating China through science and education, the talent powerhouse strategy, and the innovation-driven development strategy, refine the national innovation system, and speed up the effort to make China into an science and technology powerhouse*"[925].

8.2.2.2. SEEKING TO PROMOTE DOMESTIC CHAMPION COMPANIES

The 14th FYP also demonstrates – as did also previously the 13th FYP – the key goal of promoting domestic champion companies[926] – large, powerful Chinese companies that dominate markets domestically and globally – with language that is representative of how this goal is manifested in various Chinese legal and policy measures. For a series of industry sectors, the 14th FYP calls for "*insisting on the combination of economy and security, making up shortcomings and strengthening advantages, and properly implementing strategic design and precise strategies for the supply chain by sector, thus developing more secure and more reliable industry chains and supply chains with stronger innovation capability and higher added values*"[927]. It goes on to set the goals of fostering leading companies, specialized and

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922 Technology Daily. (2021, July 13). *Fostering of champion technology companies shall focus on establishing standards*. http://www.xinhuanet.com/tech/2021-07/13/c_1127648681.htm (accessed on 7 November 2022).

923 *14th FYP, C*hapter 2, 3 and 5.

924 MoST. (26 June 2019) - *The kick-off meeting for studying and drafting the '2021-2035 National Medium - and Long-term Science and Technology Development Plan' was held*, available at: https://www.gov.cn/xinwen/2019-06/26/content_5403265.htm (accessed on 30 August 2023).

925 See 14th FYP, Part 2.

926 *Ibid.* Part 3, Chapter 8, Sec. 2.

927 *Ibid.*

sophisticated '*little giant*' enterprises and single champion enterprises in the manufacturing sector[928], as described in more detail in Section 4.2.5.

This kind of language in high-level policy documents also makes its way into legal and regulatory measures issued by Chinese government agencies. For instance, the *Implementation Plan of the Special Action to Cultivate and Improve Single-item Champion Enterprises in the Manufacturing Industry* defines a single-item champion enterprise in the manufacturing industry as "*an enterprise that has long focused on some specific product segments in the manufacturing industry, possesses internationally leading production technology or processes, and has a market share for its individual product that ranks among the top in the world*"[929]. MIIT requires that funding for cultivating such champion enterprises is ensured and supports them in their applications for priority state-funded projects[930]. In a further example (described in more details in Section 2.3.2), the 2021 Guiding Opinions on Accelerating the Cultivation and Development of High-quality Manufacturing Enterprises set a goal to have ten thousand '*little giant*' enterprises, thousands of individual champion enterprises and a large number of pilot enterprises by 2025 and they call for using various government-backed funds to encourage private capital to establish cultivation funds for high-quality enterprises, and for guiding financial institutions to provide accurate and effective financial support to high-quality enterprises (see Section 2.3.2).

8.2.2.3. PROMOTING INDUSTRIAL RESTRUCTURING

In addition to bolstering domestic industry, industrial policies are also used to restructure existing industry, sometimes cutting away at industries that have outlived or outgrown their purpose. A key government document for this purpose is the NDRC's Catalogue for Guiding Industrial Restructuring ('*Restructuring Catalogue*', see Section 4.2.9 for further details).

The contents of the Restructuring Catalogue are not simple lists. They go into considerable detail in order to make sure that government officials implementing the policies it outlines have clear instructions on how to proceed. The Restructuring Catalogue demonstrates how the Government explicitly encourages and supports the development of certain industries and specific technologies, while discouraging, restricting and even prohibiting others. In July 2023, NDRC released a draft version of the 2023 Restructuring Catalogue for public comments, making further changes, e.g. by removing the words '*new construction*' and '*including aromatics extraction*' from these items of the restricted list[931].

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928 *Ibid.*

929 MIIT (2016). *Notice of the Ministry of Industry and Information Technology on the Implementation Plan of the Special Action to Cultivate and Improve Single-item Champion Enterprises in the Manufacturing Industry.* https://wap.miit.gov.cn/jgsj/zfs/qypy/art/2020/art_c61cdc1f38b3424aaf3d9c54086b05ce.html (accessed on 30 August 2023) (unofficial translation).

930 Ibid, Article 3 (3), Article 4 (1).

931 NDRC (2023). *Proposal of NDRC to Revise the Catalogue for Guiding Industrial Restructuring – Published for Public Comments.* https://www.gov.cn/lianbo/bumen/202307/content_6893707.htm (accessed on 31 July 2023).

A similar dynamic can be seen in the FYPs. For example, the treatment of '*modern energy systems*' in the 14th FYP for Modern Energy Systems[932] demonstrates how policymakers welcome certain types of investment, while restricting others[933]:

> [China shall] *continually optimise the coal production structure, by prioritizing the development of advanced production capacity, plan several large modern coal mines with good resource conditions, strong competitive advantages, and high degree of security and strengthen the building of intelligent, secure and efficient mines* [...].
>
> [China shall] *fully promote the large-scale exploration and high-quality development of wind power generation and solar power generation* [...].
>
> [China shall] *promote the transformation and upgrading of the refining industry, strictly control the increase of refining capacity, orderly promote the exit of outdated and low-efficient production capacity, extend the industry chains, increase the proportion of products high in added value, improve the comprehensive utilization of resources and accelerate the building of green refineries and smart refineries.*

The high importance given to national (and sectoral) FYPs in Chinese policymaking ensures that, when confronted with an investment approval decision, the authorities are likely to be guided by the FYPs' goals. For example, the Review and Approval of New Construction, Reconstruction, and Expansion of Civil Airports within Specified Authority issued by the CAAC in 2015 explains that one of the conditions for successful applications for the construction, reconstruction or expansion of civil airports is that such projects shall conform to the plan for national economic and social development and the plan for the development of the civil aviation industry[934]. Furthermore, government agencies take such guidance into account as they draft laws, regulations and policies that affect investment in the corresponding industry. For example, the State Council considered that "[a] *plan for a specific field is developed by targeting a specific field for national economic and social development,* [...] *and also serves as a basis for the government to guide the development of such field and to review and approve major projects,* [...] *as well as to develop relevant policies for the specific field*"[935]. In this way, the State is able to use its industrial policy apparatus to concretely influence the country's economy, including flows of investment.

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932 NDRC and NEA. (2022). *14th FYP for Modern Energy Systems*, Article 7, p. 9. https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202203/P020220322582066837126.pdf (accessed on 7 November 2022).

933 *Ibid.* Article 7, p. 9; Article 9, p. 13; Article 11, p. 18.

934 CAAC. (2015). *Review and Approval of New Construction, Reconstruction, and Expansion of Civil Airports within Specified Authority*, Article 7.1. http://www.caac.gov.cn/FWDT/WSBS/JCGLL/54009/201705/t20170531_44403.html (accessed on 7 November 2022).

935 State Council. (2005). *Several Opinions of State Council on Strengthening the Development of Plans for National Economic and Social Development*, Article 1.2. http://www.gov.cn/gongbao/content/2005/content_121467.htm (accessed on 13 December 2022) (unofficial translation).

8.2.3. GOAL: UTILIZE FOREIGN INVESTMENT

Increased openness to foreign investment has been an important factor in China's development, and China's leaders continue to pledge further opening of the economy. However, as China develops economically, there is greater emphasis on inviting foreign investment on China's own terms, mainly by directing or guiding foreign investment into priority industry sectors and priority geographic regions.

The State Council emphasized the need to optimize the direction of foreign investment, for example, in its 2018 Notice on Certain Measures for Actively and Effectively Utilizing Foreign Investment to Promote Quality Economic Development[936]:

> [F]*oreign investment, advanced technology, and management experience shall be vigorously attracted, foreign investors shall be supported in participating in the construction of the free trade port in Hainan in all aspects, and the pioneering role of pilot free trade zones in the aspects of expanding opening up and attracting foreign investment shall be enhanced. (The Ministry of Commerce shall take the lead, and the member entities of the Inter-Ministerial Joint Meeting for Pilot Free Trade Zone Work of the State Council shall be responsible according to the division of labor based on duties*[...]*) Foreign investors shall be guided in investing more in modern agriculture, ecological construction, advanced manufacturing, and modern services and in central and western China.*

The way in which China seeks to manage foreign investment to achieve its goals has been changing. In recent years, the Government has been seeking to transform its role from one focused on serving as a pre-establishment gatekeeper to one more focused on post-establishment regulation[937]. In March 2019, the NPC passed a new Foreign Investment Law ('*FIL*'), effective as of 1 January 2020, that explicitly applies the pre-establishment national treatment and negative list reforms to foreign investment[938].

The principal stated aims of FIL are to further open China's economy, to attract foreign investment and to better protect the rights and interests of foreign investors[939]. To these ends, the FIL makes several broad commitments to treat foreign investment consistently with

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936 State Council. (2018). *Notice of the State Council on Certain Measures for Actively and Effectively Utilizing Foreign Investment to Promote Quality Economic Development*, Article 3.9. https://www.gov.cn/zhengce/content/2018-06/15/content_5298972.htm (accessed on 7 November 2022). Unofficial translation from PKU Law, translation available at: https://www.pkulaw.com/en_law/77f7a5e976eb0f22bdfb.html?keyword=%E6%8E%A8%E5%8A%A8%E7%BB%8F%E6%B5%8E%E9%AB%98%E8%B4%A8%E9%87%8F%E5%8F%91%E5%B1%95%E8%8B%A5%E5%B9%B2%E6%8E%AA%E6%96%BD%E7%9A%84%E9%80%9A%E7%9F%A5 (accessed on 7 November 2022); see also *Decisions of the State Council on publication and implementation of provisional regulations for promoting the industrial restructuring* issued on December 2, 2005, which states "optimizing the structure of foreign trade and of utilization of foreign investment", available at: http://www.gov.cn/zwgk/2005-12/21/content_133214.htm (accessed on 8 November 2022).

937 See, e.g. *13th FYP*.

938 NPC. (2020). *Foreign Investment Law of the PRC*, Article 4. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 31 July 2023).

939 NPC. (2020). *Foreign Investment Law of the PRC*, Article 1. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 11 August 2023).

investment by domestic parties – other than with respect to permitting investment in certain industries.

Upon its passage, the FIL eliminated three existing foreign investment laws: the Law on Sino-Foreign Equity Joint Ventures (the '*EJV Law*'), the Law on Sino-Foreign Contractual Joint Ventures (the '*CJV Law*') and the Law on Wholly Foreign Owned Enterprises[940]. The FIL provides that the organizational structure and operating rules of FIEs must, like those of domestic invested enterprises, comply with China's Company Law or Partnership Enterprise Law and other relevant statutes[941]. This had the greatest impact on Sino-foreign JVs – equity JVs and cooperative JVs -, as the EJV Law and the CJV Law vested principal decision-making authority in a JV's board of directors[942], whereas the Company Law vests principal decision-making authority in a company's shareholders via the shareholders' meeting[943].

Outside of the negative list industries, the FIL commits that China will treat foreign investors and their investments no less favourably than domestic investors at "*the stage of investment access*"[944].

The FIL also includes provisions on expropriation. Article 20 provides that the Chinese government may expropriate the investments of foreign investors only '*in special circumstances*' for public purposes, and that foreign investors will receive fair compensation therefor, in each case, in accordance with law[945]. Similar commitments not to impair FIEs without legal authorization are found in in Articles 24 and 25. The FIL also signals fair treatment of foreign investors through the creation of a complaint mechanism to help foreign investors that believe their rights or interests have been infringed by administrative bodies or their personnel[946]. To implement the FIL's commitment to create a complaint handling mechanism for foreign investment, MOFCOM issued *the Rules on Handling Complaints of Foreign Invested Enterprises* ('*Complaints Rules*') that create an inter-ministerial conference system for handling the complaints of FIEs between MOFCOM and other relevant ministries at the national level and establish a *National Centre for Complaints of Foreign-Invested Enterprises* as part of MOFCOM[947].

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940 *Ibid.*, Article 42.

941 *Ibid.*, Article 31.

942 NPC. (2016). *Law on Sino-Foreign Equity Joint Ventures,* Article 6. https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY4MjIxZjA5Mjk%3D. *See* also NPC. (2017). *Law on Sino-Foreign Contractual Joint Ventures,* Article 12. https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY4ODRmNDBhY2Q%3D (accessed on 11 August 2023).

943 NPC. (2018). *Company Law of the PRC,* Article 36 and Article 98. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxY2M5OGFkODExMzQ%3D (accessed on 11 August 2023).

944 NPC. (2020). *Foreign Investment Law of the PRC,* Article 4. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 11 August 2023) (unofficial translation).

945 *Ibid.*, Article 20 (unofficial translation).

946 *Ibid.*, Article 26.

947 The Complaints Rules also guide the handling of complaints at the local level and provide applicable procedures and timelines in the *Rules on Handling Complaints of Foreign-Invested Enterprises,* Articles 2, 5, 6 and chapter 3. http://www.mofcom.gov.cn/article/b/f/202008/20200802996409.shtml (accessed on 25

Despite the ostensible shift towards post-establishment regulation, the government continues to actively determine which kinds of foreign investments are welcome into the country in the first place. The transition to a '*negative list approach*' through the issuance of a new negative list for foreign investment, the FI Negative List is largely a repackaging of the previous Catalogue of Industries for Guiding Foreign Investment[948].

Although the FIL is designed to serve as an improved legal framework for foreign investment, the implementation of the FIL lags behind in some respects. In October 2022, the Enforcement Inspection Team of the NPC Standing Committee issued a report on FIL implementation. The report noted certain major difficulties and problems, including a need for further improvement of the state's processes to combine the pre-establishment national treatment principle with the MA Negative List (see Section 8.3.9.1) and the FI Negative List, and concerns about the operation of the national security review and limited access of foreign investors to the State's major projects, such as its national science and technology programs[949]. The report also acknowledged that even for sectors not regulated by the negative lists, which foreign investors are legally entitled to access, there is not always a level playing field due to different understandings and interpretations of the negative lists by local authorities[950]. The report further notes concerns that extend beyond the negative lists, such as discriminatory treatment of some FIEs by local governments, public institutions and SOEs in the course of government procurement[951]. In addition, the report notes that FIEs may not be able to obtain the same government subsidies and preferential treatment provided to domestic companies[952], face limited IP protection and may be disadvantaged in standards development[953].

In August 2023, the State Council issued an Opinion on Further Optimising the Foreign Investment Environment and Increasing the Attraction of Foreign Investment[954]. The opinion vows to strengthen the foreign investment climate for six topics, including 24 specific measures, aimed at improving the quality of utilising foreign investment, ensuring national treatment for foreign invested companies, strengthening the protection of foreign investment, improving

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August 2023). In addition, MOFCOM issued the Working Guidelines for the National Centre for Complaints of Foreign-Invested Enterprises, which provide more details such as the materials required to submit a complaint (available at: https://www.gov.cn/xinwen/2020-10/03/5549170/files/ff4ec6044ba1497090bd73db85c72cec.pdf (accessed on 25 August 2023)) and the Directory of National Working Institutions for Complaints of Foreign-Invested Enterprises, which lists the names and contact details of the local institutions handling complaints (available at: https://www.gov.cn/xinwen/2020-10/03/5549170/files/b48e8ab6fe4840bba2b962977b132916.pdf (accessed on 25 August 2023)).

948 NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Foreign Investment Access (2021)*. https://www.gov.cn/zhengce/2022-11/28/content_5713317.htm (accessed on 31 July 2023).

949 NPC Standing Committee Enforcement Inspection Team. (2022). *Report of the Enforcement Inspection Team of NPC Standing Committee on the Inspection of Implementation of Foreign Investment Law of the PRC*. http://www.npc.gov.cn/npc/c30834/202210/ece32ab2e6f54c4caac8c2286bd59b88.shtml (accessed on 11 August 2023).

950 *Ibid.*

951 *Ibid.*

952 *Ibid.*

953 *Ibid.*

954 State Council (2023). Opinion on Further Optimising the Foreign Investment Environment and Increasing the Attraction of Foreign Investment; available at: https://www.gov.cn/zhengce/content/202308/content_6898048.htm (accessed on 15 October 2023).

investment and business facilitation, increasing fiscal and tax support and upgrading the foreign investment promotion mechanism.

However, only five out of the 24 points appear to contain new elements in the existing foreign investment mechanism, though they are not policy innovations as such and are in line with the existing general principles stipulated in the FIL. Moreover, for most of the measures, specific and clear national and provincial measures/additional detailed local implementation rules/guidance will need to be created in order for the measures to be properly implemented. Therefore, even if the 24-points seem to aim at further attracting and localising foreign investment, they remain aligned with the wider goal of directing foreign capital towards specific sectors key sectors linked to China's industrial policies or less developed regions.

8.2.3.1. LISTS AND CATALOGUES GUIDING FOREIGN INVESTMENT INTO PRIORITY INDUSTRY SECTORS

The Government aims to utilize foreign investment to advance priority industry sectors in China. China's formal policy efforts to encourage foreign investment in certain sectors date back to at least the mid-1990s and were put in place together with restrictions and prohibitions on foreign investment in other sectors. In 2017, the State Council issued two notices declaring Chinese policymakers' intentions to attract more foreign investment into China and make improvements to the role it plays in the economy.

In January 2017, the State Council published the Several Measures for Opening Wider to the Outside World and Making Active Use of Foreign Investment ('*Notice 5*')[955]. These measures declare the importance of opening the Chinese economy more to the outside world, creating a level playing field for foreign investment, and making greater efforts to attract it into the country.

In August 2017, the State Council's Several Measures for Promoting the Growth of Foreign Investment ('*Notice 39*')[956] call for progress toward the following policy goals:

- Further reduce market entry restrictions for foreign investors: Promote the full adoption of '*negative lists*' at the national level.
- Formulate supportive fiscal and taxation policies: Among other things, multinational companies are encouraged to set up headquarters in China, with preferential tax rates and other forms of financial support.
- Improve the comprehensive investment environment in national-level development zones[957].

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955 State Council. (12 January 2017). *Notice of the State Council on Several Measures for Opening Wider to the Outside World and Making Active Use of Foreign Investment*, Guo Fa 2017, No. 5. https://www.gov.cn/zhengce/content/2017-01/17/content_5160624.htm (accessed on 31 July 2023).

956 State Council. (2017, August 8). *Notice of the State Council on Several Measures for Promoting the Growth of Foreign Investment*, Guo Fa 2017, No. 39. https://www.gov.cn/zhengce/content/2017-08/16/content_5218057.htm (accessed on 31 July 2023).

957 Ibid, paras. 1–12.

The kind of prescriptive language found in these documents, and others, lends further support to the view that the Chinese authorities see foreign investment as a means to an end, and continue to be deeply engaged in modulating incentives in order to achieve their preferred configuration of foreign investment in the economy. The '*efforts*' proposed in the two documents (e.g. tax exemptions and other preferential treatment, an invitation to set-up headquarters in China, the possibility to reinvest profits abroad) are, above all, addressed towards certain geographical areas (e.g. western and central regions of China, though not exclusively) and certain sectors (e.g. technology and other high value industries)[958].

The following excerpts from these two notices demonstrate, in greater detail, how Chinese policymakers steer foreign investment flows toward specific sectors[959]:

- [...] *Foreign investors are encouraged to invest in high-end manufacturing, smart manufacturing, green manufacturing, etc., as well as industrial design and innovation, engineering consulting, modern logistics, inspection, testing and certification and other production-oriented services to transform and upgrade traditional industries.*
- *Foreign investments shall play their positive role in optimising the structure of trade in services. The preferential income tax policies applicable to service enterprises with advanced technologies that satisfy the prescribed conditions in service outsourcing pilot cities shall be rolled out across the country to guide more foreign investors to invest in high-tech and high value-added services.*
- *National-level development zones shall be supported to enhance their capacities for providing industry supporting services. In regions where conditions are ripe, foreign-owned production supporting service enterprises shall be introduced to develop, on an experimental basis, domestic and overseas maintenance business of high-tech and high value-added projects so as to foster the extension of processing trade to the middle and higher ends of the global industry chain and value chain.*

In October 2021, the MOFCOM reasserted and further specified this policy ambition. The 14th FYP for Utilising Foreign Capital for Development calls on the regulators and officials to *"guide foreign capital to invest more in industries such as digital transformation, energy conservation and environmental protection, ecological environment and green services, and participate in new infrastructure construction.* [...] *supporting foreign investors to increase investment in sectors such as mid- and high-end manufacturing, high and new technologies, traditional manufacturing transformation and upgrading and modern services,* [...] *supporting foreign-invested enterprises to develop producer service industries such as R&D design, financial services, modern logistics, supply chain management and information services, as well as life service industries such as medical care, health, pension, childcare, tourism and housekeeping,* [...] *supporting foreign-invested enterprises to set up global and regional*

958 Ibid, paras. 4–7. https://www.gov.cn/zhengce/content/2017-08/16/content_5218057.htm (accessed on 31 July 2023).

959 Notice 5, para. 1(4); Notice 39, para. 2(4) and para. 3(12).

headquarters and R&D centres, and participate in undertaking national science and technology projects [...]"[960].

Commenting on the 14th FYP for Utilising Foreign Capital for Development, MOFCOM noted that the plan "*specifically includes further optimization of the industrial structure of foreign investment, and an obvious increase in levels of attracting foreign investment in sectors such as high-tech industries, strategic emerging industries and modern services industries* [...]"[961].

The central document outlining (though not exclusively) whether particular types of investments are to be welcomed or restricted has, for many years, been the Catalogue of Industries for Guiding Foreign Investment ('*Foreign Investment Catalogue*')[962]. The Government initially promulgated the Foreign Investment Catalogue in 1995 and amended it every couple of years based upon economic development and new government policies.

When foreign investment was seen as detrimental to domestic industry or other national interests, it would be restricted, or even prohibited. Such investments were placed on the '*restricted*' or '*prohibited*' lists of the Foreign Investment Catalogue. The 2017 version of the Foreign Investment Catalogue combined these two lists into the '*negative list*' for foreign investment, and the 2017 Foreign Investment Catalogue also included a list of industries in which investment was encouraged[963]. In 2018, these two lists became the standalone national '*negative list*' for foreign investment – the FI Negative List[964] – and the list of industries for which investment is encouraged was turned into a separate Catalogue of Industries for Encouraged Foreign Investment ('*Encouraged FI Catalogue*')[965], as discussed in Section 8.2.3.1.2 below.

8.2.3.1.1. Restricted and Prohibited Investments

Government policy and regulation, in part through the FI Negative List, aim to enhance the strength and vibrancy of the Chinese economy by facilitating technology transfer and spurring domestic competition and consumption. China has amended the FI Negative List each year from 2018 to 2021, and the list has ostensibly become shorter over time. Under the current 2021

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960 MOFCOM. (2021). *14th FYP for Utilizing Foreign Capital for Development*, § 4.1. http://images.mofcom.gov.cn/wzs/202110/20211022094012249.pdf (accessed on 7 November 2022).

961 MOFCOM. (2021). *14th FYP for Utilizing Foreign Capital for Development*, § 2.3. http://images.mofcom.gov.cn/wzs/202110/20211022094012249.pdf (accessed on 7 November 2022); People's Daily. (2021, November 2). *China has new guidelines for attracting foreign investment*. http://www.gov.cn/zhengce/2021-11/02/content_5648317.htm (accessed on 7 November 2022).

962 NDRC and MOFCOM. (2017). *Catalogue of Industries for Guiding Foreign Investment (2017 Revision)*. https://www.gov.cn/xinwen/2017-06/28/content_5206424.htm (accessed on 28 August 2023).

963 NDRC and MOFCOM. (2017). *Catalogue of Industries for Guiding Foreign Investment (2017 revision)*. https://www.gov.cn/xinwen/2017-06/28/5206424/files/e4489bbd621542a480ff4c45c42fa202.pdf (accessed on 30 August 2023).

964 NDRC and MOFCOM. (2018). *Special Administrative Measures (Negative List) for Foreign Investment Access (2018 Version)*. https://www.gov.cn/gongbao/content/2018/content_5317104.htm (accessed on 31 July 2023); MOFCOM. (2019). *Interpretations regarding the 2018 Version of the Special Administrative Measures (Negative List) for Foreign Investment Access*. http://swj.xianning.gov.cn/xxgk/zc/zcjd/201906/t20190611_1728315.shtml (accessed on 31 July 2023).

965 NDRC and MOFCOM. (2019). *Catalogue of Industries for Encouraged Foreign Investment (2019 Version)*. https://www.gov.cn/xinwen/2019-06/30/content_5404701.htm (accessed on 30 August 2023).

FI Negative List (effective as of 1 January 2022), 10 business sectors are restricted and 21 are prohibited.

Investments that are '*restricted*' under the FI Negative List are subject to higher levels of government scrutiny, limitations on the choice of corporate forms (such as mandatory JVs) and ownership ceilings. Such restrictions apply, for instance, to certain sub-sectors within the services sector, including market survey services[966]. Foreign investments that fall under the '*prohibited*' category are, simply, not permitted at all. This category includes, for example, domestic postal services.

Restricted investments are often subject to requirements that foreign investors enter into JVs with Chinese partners, or certain restrictions or requirements relating to equity ownership by foreign investors. Many such requirements can be found in the 2021 version of the FI Negative List, for example:

> 1. *The Chinese party shall hold at least 34% of the shares of a company undertaking the breeding* [and seed production] *of new wheat varieties; breeding* [and seed production] *of new corn varieties must be undertaken by a company controlled by the Chinese party.* [...]
>
> 6. *For the printing of publications, the controlling stake must be held by the Chinese party.* [...]
>
> 8. *For the construction or operation of nuclear power plants, the controlling stake must be held by the Chinese Party.* [...]
>
> 10. *Domestic water transport companies must be controlled by the Chinese party.* [...]
>
> 17. *Investment in market surveys shall be limited to the form of equity joint ventures, and where radio or television rating surveys are concerned, the controlling stake must be held by the Chinese party*[967].

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966 NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Foreign Investment Access (2021)*, item 17. https://www.gov.cn/zhengce/2022-11/28/content_5713317.htm (accessed on 31 July 2023).

967 *Ibid.* Items 1, 6, 8, 10, and 17. https://www.gov.cn/zhengce/2022-11/28/content_5713317.htm. Unofficial translation from LexisNexis, translation available at: https://hk.lexiscn.com/law/content_cnen.php?eng=0&provider_id=1&isEnglish=Y&origin_id=4150898&keyword=5aSW5ZWG5oqV6LWE5YeG5YWl54m55Yir566h55CG5o6q5pa977yI6LSf6Z2i5riF5Y2V77yJLOWkluWVhuaKlei1hOaKlei1hOWHhuWFpeeJueWIq+euoeeQhuaOquaWvSzlpJbllYbmipXotYTlh4blhaXnibnliKvnrqHnkIbmjqrmlr0s5aSW6LWE5oqV6LWE5YeG5YWl54m55Yir566h55CG5o6q5pa9LOWkluWVhuWHhuWFpeeJueWIq+euoeeQhuaOquaWvSzlpJbotYTlh4blhaXnibnliKvnrqHnkIbmjqrmlr0s5aSW5ZWG5oqV6LWELOi0n+mdoua4heWNlSzmipXotYQs5YeG5YWlLOeJueWIqyznrqHnkIYs5aSW5ZWGLOi0n+mdoizmuIXljZUs5aSW6LWELOaOquaWvQ==&t_kw=5aSW5ZWG5oqV6LWE5YeG5YWl54m55Yir566h55CG5o6q5pa977yI6LSf6Z2i5riF5Y2V77yJLOWkluWVhuaKlei1hOaKlei1hOWHhuWFpeeJueWIq+euoeeQhuaOquaWvSzlpJbllYbmipXotYTlh4blhaXnibnliKvnrqHnkIbmjqrmlr0s5aSW6LWE5oqV6LWE5YeG5YWl54m55Yir566h55CG5o6q5pa9LOWkluWVhuWHhuWFpeeJueWIq+euoeeQhuaOquaWvSzlpJbotYTlh4blhaXnibnliKvnrqHnkIbmjqrmlr0s5aSW5ZWG5oqV6LWELOi0n+mdoua4heWNlSzmipXotYQs5YeG5YWlLOeJueWIqyznrqHnkIYs5aSW5ZWGLOi0n+mdoizmuIXljZUs5aSW6LWELOaOquaWvQ==&prid=a060ae8e-6805-4931-12b8-68983ca63336&crid=4181530f-fbb5-4abd-97f6-07d0f3701051 (accessed on 31 July 2023).

Although the use of the term '*negative list*' would suggest that it provides a one-stop resource for all restrictions, that is not in fact the case. Aside from additional licensing and approval requirements, additional limiting parameters can also be found scattered throughout various other regulatory and policy documents. For instance, the *Provisions on the Administration of Foreign-funded Telecommunications Enterprises* stipulate that "*In a foreign-invested telecom enterprise operating basic telecom services (excluding the wireless paging service), the foreign investors' total capital contribution shall not exceed 49%, unless otherwise required by the state. In a foreign-invested telecom enterprise operating value-added telecom services (including the wireless paging service of basic telecom services), the foreign investors' total capital contribution shall not exceed 50%, unless otherwise required by the state*"[968].

Lastly, and in an apparent move to emphasize reciprocity in liberalizing foreign investment policies, the FIL reserves the Chinese government's right to retaliate against countries and regions that discriminate Chinese investment with '*corresponding measures*'. Article 40 of FIL notes that "*where any country or region adopts any prohibitive, restrictive or other similar discriminatory measures against the People's Republic of China in terms of investment, the People's Republic of China may adopt corresponding measures against the aforesaid country or region according to the actual circumstances*"[969].

8.2.3.1.2. Encouraged Investments

In line with the effort to create a standalone negative list, the listing of encouraged investments under the previous Foreign Investment Catalogue has been separated into the new Encouraged FI Catalogue.

The Encouraged FI Catalogue includes a number of high-tech and advanced manufacturing sectors, such as those relating to aerospace and pollution control. Such encouraged foreign investment may receive preferential terms, such as waiver of customs duty for importing certain equipment, possibly lower land prices and lower income tax rate at 15% for investing in some areas in western China or Hainan province[970].

This catalogue continues to expand with the 2022 version increasing the number of entries from 1 235 to 1 474[971]. It was noted by official Chinese sources that the Encouraged FI Catalogue would allow foreign capital to '*further exert the positive role*' in the industrial chain and supply chain, while "*the national catalogue continues to take the manufacturing industry as the key direction for encouraging foreign investment, and adds relevant content according to the guidance of 'introducing capital to supplement the chain', 'introducing capital to strengthen*

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968 State Council. (2022). *Provisions on the Administration of Foreign-funded Telecommunications Enterprises*, Article 6; available at: https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE4MGUwYTQ0MTAxODExZTMwNDljYTE0MDE (accessed on 31 July 2023) (unofficial translation).

969 NPC. (2020). *Foreign Investment Law of the PRC*, Article 40. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D. Unofficial translation from PKU Law, translation available at: https://www.pkulaw.com/en_law/6a88714068b3724dbdfb.html?keyword=%E5%A4%96%E5%95%86%E6%8A%95%E8%B5%84%E6%B3%95 (accessed on 29 August 2023).

970 MOFCOM. (2022, October 29). *MOFCOM's Response regarding the Encouraged FI Catalogue (Version 2022)*. https://www.gov.cn/zhengce/2022-10/29/content_5722482.htm (accessed on 7 November 2022).

971 *Ibid.*

the chain' and 'introducing capital to expand the chain.' In the field of raw materials, items such as high-purity electronic grade hydrofluoric acid, hydrogen fluoride, and special glass fibres are added or modified; in the field of components, items such as high-pressure vacuum components, special valves, and wheel speed sensors are added or modified; in the field of end products, items such as integrated circuit test equipment, laser projection equipment, ultra-high-definition televisions, ventilators and artificial intelligence-assisted medical equipment are added or modified"[972].

The Government seeks also to steer foreign investment flows towards specific geographic areas (see, for example, the Notice of the State Council on Several Measures for Opening Wider to the Outside World and Making Active Use of Foreign Investment[973] and the Notice of the State Council on Several Measures for Promoting the Growth of Foreign Investment[974]). Accordingly, the Encouraged FI Catalogue includes a comprehensive catalogue designed to coordinate foreign investment in particular geographic areas[975]. It includes two sections: (*i*) catalogue of industries for encouraged foreign investment in the whole country of China, and (*ii*) catalogue of priority industries for foreign investment in central and western China. This second catalogue lists encouraged activities and investment sectors for provinces or regions in central and western China (i.e. Shanxi, Inner Mongolia, Liaoning, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei, Hunan, Guangxi, Hainan, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang)[976].

China also encourages local authorities to attract certain types of foreign investment, and the central government allows local governments to develop preferential policies for doing so[977].

The Shanghai government, for example, provides incentives for establishing a corporate headquarters in the city[978], and the Shanghai Tax Bureau and the Finance Bureau as well as other authorities facilitate and support the establishment of regional headquarters in the municipality. In the past, the Shanghai government's subsidies included support funds for office rental, office setup and other financial incentives[979]. Support may also extend to trade, R&D, project investment and the protection of a company's intellectual property. Unlike the previous

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972 Peiyu X. (2020, December 30). *China makes additional efforts to attract foreign investment (Ruicaijing)*. People's Daily Online. http://politics.people.com.cn/n1/2020/1230/c1001-31983738.html (accessed on 7 November 2022) (unofficial translation).

973 State Council. (2017, January 12). *Notice of the State Council on Several Measures for Opening Wider to the Outside World and Making Active Use of Foreign Investment*, Guo Fa 2017, No. 5. https://www.gov.cn/zhengce/content/2017-01/17/content_5160624.htm (accessed on 25 August 2023).

974 State Council. (2017, August 8). *Notice of the State Council on Several Measures for Promoting the Growth of Foreign Investment*, Guo Fa 2017, No. 39. https://www.gov.cn/zhengce/content/2017-08/16/content_5218057.htm (accessed on 25 August 2023).

975 NDRC and MOFCOM. (2022). *Catalogue of Industries for Encouraged Foreign Investment (2022 Version)*. https://www.gov.cn/zhengce/2022-11/29/content_5730383.htm (accessed on 31 July 2023).

976 *Ibid.*

977 Economy Daily. (2016). *Deputy Commissioner of NDRC: Local Governments May Develop Policies for Foreign Investment*. https://www.gov.cn/xinwen/2016-12/31/content_5155098.htm (accessed on 11 August 2023).

978 Shanghai Municipal People's Government. (2022). *Provisions of Shanghai Municipality on Encouraging Multinational Companies to Set Up Regional Headquarters*. https://www.shanghai.gov.cn/gwk/search/content/6fa86f4b65554f43bc9633fca378ffa9 (accessed on 16 August 2023).

979 *Ibid.*

version, the latest *Provisions of Shanghai Municipality on Encouraging Multinational Companies to Set Up Regional Headquarters*, which were amended in October 2022, does not list specific financial incentive measures[980].

Guangdong Province, a major destination for foreign investment, also has such preferential policies, including policies providing for incentives and subsidies for foreign investment projects, policies related to multinational company headquarters and foreign R&D centres in the province and special support policies for projects in the province's pilot free trade zone[981].

Zhejiang Province is another example. In March 2023, the Zhejiang provincial government issued *Several Measures for Attracting and Utilising Foreign Investment with Greater Efforts*, focusing on investment in advanced manufacturing sectors and key service sectors and the placement of multinational company headquarters in the province. Under the measures, Zhejiang is to provide incentives and subsidies for eligible foreign investment[982].

8.2.3.1.3. Foreign Investment to Facilitate Technology Transfer

As it seeks to develop the country's technological and innovation capabilities, the Government has been particularly focused on attracting foreign investment to bring needed technologies into the country, and to encourage the transfer of those technologies to, or the cultivation of relevant capabilities amongst, domestic industry players. This has led to the imposition of technology transfer requirements through written measures and, more commonly, through the structuring of incentives and through unwritten pre-conditions for market access implemented via the investment approval processes detailed in Section 8.3.

Although explicitly stated technology transfer requirements in laws and regulations have been prohibited by the FIL[983], policy documents and statements make clear that technology transfer remains an important goal of policymakers. For instance, technology transfer may be a necessary result of the structure of another regulatory requirement; JVs are a good example.

Foreign investment restrictions such as a JV requirement have long been criticised as one of the most problematic Chinese measures for foreign technology transfer[984]. While China has over the years taken notable steps to relax and remove formal JV requirements in key sectors through the FIL and revised negative lists, there are ways for the Government to continue to effectively require JV arrangements. In fact, according to a 2020 survey conducted by the EUCCC, only 31% of the respondent companies increased their share in a JV following the lifting of equity caps in 2019, with only 5% reporting to have '*bought out* [their] *Chinese partner*' to establish

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980 *Ibid.*

981 People's Daily. (2023). *Foreign Investment Expansion, Utilization of Foreign Investment to A Higher Level.* http://paper.people.com.cn/rmrb/html/2023-01/28/nw.D110000renmrb_20230128_3-01.htm (accessed on 11 August 2023).

982 General Office of Zhejiang Provincial People's Government. (2023). *Several Measures for Attracting and Utilizing Foreign Investment with Greater Efforts.* http://zcom.zj.gov.cn/art/2023/4/4/art_1229562310_2473231.html (accessed on 11 August 2023).

983 NPC. (2020). *Foreign Investment Law of the PRC*, Article 22. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 11 August 2023).

984 Office of the USTR. (25 September 2018). *Joint Statement on Trilateral Meeting of the Trade Ministers of the United States, Japan, and the European Union.* https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/september/joint-statement-trilateral (accessed on 16 August 2023).

a wholly foreign owned enterprise and 20% taking a controlling share[985]. Some of the key mechanisms through which a preference for a Sino-Foreign JV may continue are:

- Informal (but express) JV requirement: Chinese officials can informally require a JV arrangement as a condition for the necessary approvals, even where there was no such legal requirement.
- Administrative discretion against foreign investors: Government agencies may use their broad discretion to systematically disfavour foreign or foreign-controlled companies.
- Discriminatory subsidies and other measures that effectively favour domestic companies: Foreign firms are also reported to be reluctant to change JV arrangements, seeing Chinese partners as a necessity to access lucrative subsidies, R&D support and other government assistance considered to favour Chinese entities[986] (see also Chapter 22).
- Lastly, some may be simply reluctant to change the business structure that has been in place for decades[987], or Chinese partners may simply refuse to sell their shares[988].

While many technology transfer arrangements are fair and consented to, concerns about unfair practices relating to technology and intellectual property transfer have led the US Trade Representative to launch an investigation under Section 301 of the US *Trade Act of 1974*[989].

8.3. Advancing China's Industrial Policy Goals Through Investment Approval Processes

While Chinese industrial policies find expression in laws and regulations regulating foreign investment, the investment approval process itself allows the authorities to more dynamically apply industrial and economic development policies to proposed investments on a case-by-case basis.

This section presents how the Government has set up a system for processing both foreign and domestic investment applications that allows it to micromanage access to the market and maintain an important role in overseeing and influencing the investment decisions of investors.

In particular, the section examines how government policy is implemented through the approval process via: (1) the inherent structure of the approval/filing process, which is in large part guided by the contents of industrial policy catalogues and negative lists that meticulously, and with great specificity, convert high-level policy guidance into approval/filing requirements and

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985 EUCCC. (2020). European Business in China Business Confidence Survey 2020 "*Navigating in the Dark*". p. 58.

986 See also Alves Dias, P. et al. (2019). China: Challenges and Prospects from an Industrial and Innovation Powerhouse. https://publications.jrc.ec.europa.eu/repository/handle/JRC116516 (accessed on 16 August 2023).

987 EUCCC (2018). 2018/2019 Position Paper. https://www.europeanchamber.com.cn/en/publications-archive/646/European_Business_in_China_Position_Paper_2018_2019 (accessed on 16 August 2023).

988 EUCCC (2020). European Business in China Business Confidence Survey 2020 "*Navigating in the Dark*". p. 59.

989 Office of the USTR (2017). USTR Announces Initiation of Section 301 Investigation of China. https://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/august/ustr-announces-initiation-section (accessed on 16 August 2023).

restrictions for investment projects[990], and (2) substantive criteria applied through administrative discretion granted to approval authorities.

8.3.1. Overview of Investment Approval Process

The following chart presents, at a high level, the steps of the approval/filing process for domestic and foreign investments in China. Not all steps apply to all investments. Some steps apply only to foreign investments (i.e. Steps 1B and 1C), while other steps (except for Step 2) only apply to certain types of investments.

Step	Administrative Discretion	Approval/Filing Requirements
1A	High	**AML Review** *SAMR*[991]
1B	High	[For foreign investment only] **National Security Review of Foreign Investment** *Foreign Investment Security Review: Working Mechanism (led by NDRC and MOFCOM)*
1C	High	[For foreign investment only] **Approval of Foreign Investment in the Restricted Sectors of the Foreign Investment Negative List** *Industry regulators*
1D	High	**Pre-Registration Licensing**[992] *Industry regulators*
1E	High	**State-Owned Assets Investment Review**

990 NDRC and MOFCOM. (2022). MA Negative List. https://www.ndrc.gov.cn/xwdt/tzgg/202203/P020220325360523452630.pdf (accessed on 7 November, 2022); NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Foreign Investment Access (Negative List)*. https://www.gov.cn/zhengce/2022-11/28/content_5713317.htm (accessed on 7 November 2022); NDRC and MOFCOM. (2021). *Special Administrative Measures for Access of Foreign Investment in Pilot Free Trade Zones (Negative List)*. https://www.gov.cn/zhengce/2022-11/28/content_5713318.htm (accessed on 7 November 2022).

991 SAMR's *Regulations on Review of Business Operator Concentration* (published on 10 March 2023, effective 15 April 2023) stipulates that "*SAMR may, based on its work needs, designate and authorize the market regulation authorities at levels of province, autonomous region, and municipality directly under Central control (hereinafter "SAMR at Provincial Level") to conduct the review of business operator concentration.*". See SAMR. (2023). *Regulations on Review of Business Operator Concentration*. https://www.gov.cn/gongbao/content/2023/content_5754540.htm?eqid=d8cb86e4000ee76100000005648db726 (accessed on 25 August 2023).

992 Whether a license is required depends upon the contemplated business activities. Most of the licenses or filings required are post-registration.

		SASAC or local SASACs, parent enterprises or central or local governments
2	**Low**	**Registration for Formation** *SAMR and Local AMRs*
3A or 3B	**High**	**Project Approval**[993] *NDRC or local DRCs*
	Medium	**Project Filing**[994] *Local DRCs*
4	**Medium**	**Land, Zoning, and Construction**[995] *Various authorities (e.g. for environmental permits)*
5A and /or 5B	**High**	**Post-Registration Licensing**[996] *Industry regulators*
	Medium	**Post-Registration Filing** *Industry regulators*
6	**High**	**Cybersecurity Review** *Led by the Central Cyberspace Affairs Commission, cybersecurity review members include CAC, together with NDRC, MIIT, the Ministry of Public Security ('MPS'), the Ministry of State Security ('MSS'), MOF, MOFCOM, PBOC, SAMR, the National Radio and Television Administration ('NRTA'), CSRC, the National Administration of State Secret Protection ('NASSP') and the Office of State Commercial Cryptography Administration ('OSCCA')*

Some of these steps allow for significant amounts of administrative discretion, which can among other things be used to advance China's industrial policy goals.

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993 Only fixed-asset investment projects require project approval or filing with NDRC or local DRCs. Depending upon local practice, it might be required before the registration for formation. But usually, local DRCs may agree that investors may establish the enterprise first, after which the enterprise may submit its application for the project approval/filing.

994 *Ibid.*

995 Most of the approvals in this step are required after the project approval.

996 The post-registration licensing or monitoring requirements do not necessarily require the project approval/filing.

8.3.2. ADMINISTRATIVE DISCRETION

Approval requirements play an important role in enabling Chinese government authorities to manage the economy, with each approval requirement creating an opportunity for officials to exercise varying levels of discretion in deciding if and how an investment project goes forward. Officials tasked with approving investment projects are expected to apply substantive criteria particular to the approval requirement. However, such criteria can often be vague, and the amount of discretion granted to authorities when tasked with applying them broad. This wide discretion serves as a channel for officials to (*i*) apply industrial and economic development policies and other government priorities on a case-by-case basis, (*ii*) apply non-public or unwritten policy guidance and (*iii*) impose their own views and interests. Investors may receive informal, oral instructions from officials that go beyond the requirements of the law[997].

8.3.3. STEP 1A – ANTI-MONOPOLY LAW REVIEW[998]

If an investment causes a business concentration that meets the thresholds for a pre-closing filing[999], the relevant companies involved in the investment transaction must make a filing with SAMR prior to the concentration. SAMR may also investigate a concentration that does not

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997 Covington & Burling LLP. (2014). *Measures and practices restraining foreign investment in China, prepared for the European Commission Directorate-General for Trade*, Sec. 3.3.

998 Standing Committee of the NPC. (2022). *2022 AML*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE4MjM0Y2NiNTAxODI5ZjQ2YzZhYzJhNWE%3D (accessed on 31 July 2023); State Council. (2018). *Provisions of the State Council on the Standards for Declaration of Concentration of Business Operators*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNlOTc4NDAxNmY0MjQ2NGMzMjA0NDc%3D (accessed on 7 November 2022); SAMR. (2023). *Regulations on Review of Business Operator Concentration*. https://www.gov.cn/gongbao/content/2023/content_5754540.htm?eqid=d8cb86e4000ee76100000005648db726 (accessed on 31 July 2023); SAMR. (2018). *Guiding Opinions on the Declaration of Concentration of Business Operators*. https://www.gov.cn/zhengce/zhengceku/2018-12/31/content_5459698.htm (accessed on 7 November 2022). As of writing of this Report, due to the amendments to the AML in 2022, China was in the process of amending the *Provisions of the State Council on the Standards for Declaration of Concentration of Business Operators* which is a supporting document of the AML. See SAMR. (2022, June 27). *Announcement of SAMR on Public Solicitation of Comments on the Provisions of the State Council on the Standards for Declaration of Concentration of Business Operators (Draft for Comments)*. https://www.samr.gov.cn/cms_files/filemanager/samr/www/samrnew/hd/zjdc/202206/t20220625_348149.html (accessed on 30 August 2023).

999 State Council. (2018). *Provisions of the State Council on the Standards for Declaration of Concentration of Business Operators*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNlOTc4NDAxNmY0MjQ2NGMzMjA0NDc%3D (accessed on 7 November 2022); SAMR. (2018). *Guiding Opinions on the Declaration of Concentration of Business Operators*. https://www.gov.cn/zhengce/zhengceku/2018-12/31/content_5459698.htm (accessed on 7 November 2022). Standing Committee of the NPC. (2022). *2022 AML*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE4MjM0Y2NiNTAxODI5ZjQ2YzZhYzJhNWE%3D (accessed on 31 July 2023); SAMR. (2023). *Regulations on Review of Business Operator Concentration*, Article 8. https://www.gov.cn/gongbao/content/2023/content_5754540.htm?eqid=d8cb86e4000ee76100000005648db726 (accessed on 31 July 2023).

meet the thresholds[1000]. The AML review can take up to 180 days[1001]. After review, SAMR will decide whether to unconditionally approve, conditionally approve or prohibit a concentration. In cases of conditional approval, SAMR's Anti-Monopoly Bureau may decide to impose restrictions to reduce a concentration's anti-competitive effect[1002]. Restrictions may include spin-offs of tangible and intangible assets, behavioural conditions (e.g. access to infrastructure or technologies) and combinations thereof[1003].

SAMR is allowed to consider industrial policy considerations during its review[1004]. Under Article 33.5 of the AML, one of the factors that shall be considered during an AML review is the "*impact of the concentration of business operators on the national economic development*", which means that SAMR may also have to consider industrial policies when conducting the AML review[1005].

8.3.4. STEP 1B – FOREIGN INVESTMENT SECURITY REVIEW[1006]

China issued a new security review regulation on foreign investment, which took effect on 18 January 2021. The regulation provides that if a foreign investment affects or might threaten the national security of China, then it is subject to security review[1007]. Under such circumstances, the applicant – i.e. the foreign investor(s) or relevant domestic parties – must file an application to the Working Mechanism Office led by NDRC and MOFCOM prior to the commencement of investment[1008].

1000 Standing Committee of the NPC. (2022). 2022 AML, Article 26. https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE4MjM0Y2NiNTAxODI5ZjQ2YzZhYzJhNWE%3D (accessed on 31 July 2023); SAMR. (2023). *Regulations on Review of Business Operator Concentration*, Article 8. https://www.gov.cn/gongbao/content/2023/content_5754540.htm?eqid=d8cb86e4000ee76100000005648db726 (accessed on 31 July 2023).

1001 AML, Articles 30, 31.

1002 Ibid, Article 35.

1003 SAMR. (2023). *Regulations on Review of Business Operator Concentration*, Article 40. https://www.gov.cn/gongbao/content/2023/content_5754540.htm?eqid=d8cb86e4000ee76100000005648db726 (accessed on 30 August 2023).

1004 AML, Article 33.5.; Chongqing Municipal Administration for Market Regulation. (2022). *Q&A regarding AML*. https://scjgj.cq.gov.cn/zt_225/cjscjz/zcjd/202206/t20220616_10821755_wap.html. Cangzhou Municipal Administration for Market Regulation. (2023). *Interpretations of the AML*. https://scjgj.cangzhou.gov.cn/scjd/c100611/202308/e07007f7ffc9458899ffc6e1c58449fe.shtml (accessed on 30 August 2023).

1005 AML, Article 33.5.

1006 NDRC and MOFCOM. (2020). *Measures for the Security Review of Foreign Investment*. https://www.gov.cn/gongbao/content/2021/content_5582626.htm (accessed on 7 November 2022); NPC (2020). *Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 7 November 2022); State Council. (2020). *Regulations for Implementing the Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NzRjN2EzZDAxNzc2YzUyODAxNDE2MTI%3D (accessed on 7 November 2022).

1007 NDRC and MOFCOM. (2020). *Measures for the Security Review of Foreign Investment*, Article 2. https://www.gov.cn/gongbao/content/2021/content_5582626.htm (accessed on 7 November 2022).

1008 *Ibid.*, Article 2, 3, 4.

Given the regulation is relatively new and the review process is rather opaque, it is still unclear, as of writing of this Report, how much time a review will actually take[1009].

Upon concluding the review, the Working Mechanism Office decides either to permit, prohibit, or conditionally approve the foreign investment. Conditional approval is subject to the investors accepting requirements designed to eliminate the adverse impacts on national security[1010]. The nature of the conditions is not specified by the rules, but such conditions may include transfer of certain shares to eliminate actual control by foreign investor(s) or spin-off of assets or businesses that may affect China's national security.

Since national security is often broadly construed in Chinese legal and policy documents[1011], the inclusion of this review creates substantial discretion for regulators to channel industrial policy priorities.

8.3.5. Step 1C – Approval of Foreign Investment in the Restricted Sectors of the Foreign Investment Negative List

If foreign investors want to invest in one of the restricted lists under the FI Negative List (see Section 8.2.3 above), they must first obtain approval from the relevant industry regulator before registering the enterprise. A typical condition of investment in the restricted sectors are that the Chinese shareholder(s) shall be the majority shareholder(s). However, in practice, it has been extremely difficult and complex to obtain the approval from industry regulators for foreign investment in a restricted sector. Even if an approval is granted, that is usually on a case-by-case basis and can hardly be a precedent for other foreign investors.

8.3.6. Step 1D – Pre-Registration Licensing[1012]

1009 *Ibid.*, Articles 7, 8, 9.

1010 Ibid, Article 9.

1011 As defined in the PRC *National Security Law*, "[N]*ational security refers to political power of the state, sovereignty, unity and territorial integrity, people's well-being, sustainable development of economy and society, and other significant interests of the state are relatively free from danger and threats within and outside the state, and the country's capacity for safeguarding continued security*". Standing Committee of the NPC. (2015). *National Security Law of the PRC*, Article 2. https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3ZTA2NzA4MmY%3D. Unofficial translation from LexisNexis, translation available at: https://hk.lexiscn.com/law/content_cnen.php?eng=0&provider_id=1&isEnglish=Y&origin_id=2615853&keyword=5Zu95a625a6J5YWo5rOV&t_kw=5Zu95a625a6J5YWo5rOV&prid=a7709941-12f0-d808-3af1-c472251505d5&crid=828a22d3-ca7d-4505-8a84-e422379beb31 (accessed on 31 July 2023).

1012 Standing Committee of the NPC (2019). *Administrative License Law of the PRC*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYyMTZiZjk2YjFhZTY%3D (accessed on 7 November 2022); State Council (2020). *Decision of the State Council to Cancel or Delegate to Lower-Level Authorities a Group of Administrative Licensing Items*. https://www.gov.cn/zhengce/content/2020-09/21/content_5545345.htm (accessed on 7 November 2022); State Council. (2021). *Notice by the State Council Regarding Deepening the Reform of Separating Permits from Business Licenses and Further Increasing the Development Vitality of Market Participants*. https://www.gov.cn/zhengce/content/2021-06/03/content_5615031.htm (accessed on 7 November 2022); SAMR. (2021). *Notice by the State Administration for Market Regulation of Maximizing the Functional Role to Deepen the Reform of 'Separating Permits and Certificates from Business Licenses'*. https://www.samr.gov.cn/djzcj/zyfb/zjfb/art/2023/art_94cfa4a5b7474199b0256a58be53a6fd.html (accessed on 7 November 2022); MOFCOM. (2021). *Notice Issuing the Implementation Plan for Deepening the Reform of 'Separation of Permits from Business Licenses' and Further Stimulating the*

Investment in certain sectors, and related business operations, are subject to obtaining business operation-related licenses prior to the registration for formation, regardless of whether it is a foreign investment or a Chinese domestic investment.

In general, most licenses that Chinese companies require can be obtained post-registration. However, among the more than 400 activities for which companies require a license from the Chinese government (assuming they occur outside of the more liberal free zones), 35 types of activities require pre-registration licenses[1013].

Examples of business activities that still require pre-registration licenses include establishment of a securities company (approval by the CSRC), a financial holding company (approval by the PBOC), and a foreign bank representative office in China (approval by the CBIRC)[1014].

These industry regulators have broad leeway to regulate industries within their domains, creating, granting, and administering various industry licenses and license-type approvals. This creates significant administrative discretion that officials can use to pursue China's overall industrial policy goals.

8.3.7. Step 1E – State-Owned Assets Investment Review

Investment activities in China might involve state-owned assets in enterprises. In such circumstances, the transaction[1015] might be subject to review by SASAC or its local counterparts, the state-owned or controlled enterprise that directly or indirectly invests in the Chinese investor or central or local governments. The objective of this review is to prevent losses of state-owned assets[1016].

In general, the Measures for the Supervision and Administration of the Transactions of State-Owned Assets of Enterprises[1017] explicitly note that "[f]*or transfer of rights and interests in an*

Development Vitality of Market Participants. http://bgt.mofcom.gov.cn/article/gztz/202107/20210703175900.shtml (accessed on 7 November 2022).

1013 SAMR (2021). *Notice of State Administration for Market Regulation on Adjusting the Catalogue of Pre-Registration Approval Items of Enterprises*. https://www.beijing.gov.cn/zhengce/zhengcefagui/qtwj/202204/t20220415_2677961.html (accessed on 7 November 2022); State Council. (2021). *Notice by the State Council Regarding Deepening the Reform of Separating Permits from Business Licenses and Further Increasing the Development Vitality of Market Participants*.https://www.gov.cn/zhengce/content/2021-06/03/content_5615031.htm (accessed on 30 August 2023).

1014 SAMR (2021). *Notice of State Administration for Market Regulation on Adjusting the Catalogue of Pre-Registration Approval Items of Enterprises*. https://www.beijing.gov.cn/zhengce/zhengcefagui/qtwj/202204/t20220415_2677961.html (accessed on 7 November 2022).

1015 Such transactions include transfer of rights and interests in enterprises, capital increase in enterprises and transfer of assets of enterprises. See SASAC and MOF. (2016). *Measures for the Supervision and Administration of the Transactions of State-Owned Assets of Enterprises*, Article 3. http://www.gov.cn/gongbao/content/2016/content_5115848.htm (accessed on 11 November 2022).

1016 SASAC and MOF (2016). *Measures for the Supervision and Administration of the Transactions of State-Owned Assets of Enterprises*, Articles 1, 6. http://www.gov.cn/gongbao/content/2016/content_5115848.htm (accessed on 11 November 2022)

1017 SASAC and MOF (2016). *Measures for the Supervision and Administration of the Transactions of State-Owned Assets of Enterprises*, available at: http://www.gov.cn/gongbao/content/2016/content_5115848.htm (accessed on 11 November 2022)

enterprise, no qualifications or conditions shall in principle be set on the transferees"[1018]. However, this free transfer requirement of SOE assets to any kind of buyer does not apply if the buyer is a foreign investor. In such cases, the transaction must meet relevant requirements including those stipulated in the FI Negative List and conform to provisions related to foreign investment security review (see Section 8.2.3.1.1)

8.3.8. STEP 2 –REGISTRATION FOR FORMATION[1019]

Before a '*market entity*' (including individuals, corporations and unincorporated organizations) can carry out for-profit activities in China, it shall first register with the SAMR or its local counterparts. In accordance with the FIL and its implementation regulations, SAMR and its local counterparts are responsible for the registration of foreign-invested enterprises. Information submitted to the SAMR's enterprise registration system will be shared with MOFCOM and other authorities[1020].

8.3.9. STEP 3A – PROJECT APPROVAL[1021]

1018 Ibid, Article 14.

1019 State Council (2022). *Regulation of the People's Republic of China on the Administration of the Registration of Market Entities*. https://www.gov.cn/zhengce/content/2021-08/24/content_5632964.htm (accesses 7 November 2022); SAMR. (2022). *Administrative Measures for the Authorization to Administer the Registration of Foreign-Invested Enterprises*. https://www.gov.cn/zhengce/2022-03/02/content_5723513.htm (accessed on 7 November 2022); NPC. (2020). *Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 7 November 2022); State Council. (2020). *Regulations for Implementing the Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NzRjN2EzZDAxNzc2YzUyODAxNDE2MTI%3D (accessed on 7 November 2022).

1020 NPC. (2020). *Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 7 November 2022); State Council. (2020). *Regulations for Implementing the Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NzRjN2EzZDAxNzc2YzUyODAxNDE2MTI%3D (accessed on 7 November 2022).

1021 NDRC. (2021). *Several Opinions of NDRC on Further Promoting the Reform of the Approval System for Investment Projects*. https://www.gov.cn/zhengce/zhengceku/2021-12/22/content_5663959.htm (accessed on 7 November 2022); NPC. (2020). *Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 7 November 2022); State Council. (2020). *Regulations for Implementing the Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NzRjN2EzZDAxNzc2YzUyODAxNDE2MTI%3D (accessed on 7 November 2022); NDRC and MOFCOM. (2022). MA Negative List. https://www.ndrc.gov.cn/xwdt/tzgg/202203/P020220325360523452630.pdf (accessed on 7 November 2022); NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Foreign Investment Access (2021)*. https://www.gov.cn/zhengce/2022-11/28/content_5713317.htm (accessed on 7 November 2022); NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Access of Foreign Investment in Pilot Free Trade Zones*. https://www.gov.cn/zhengce/2022-11/28/content_5713318.htm (accessed on 7 November 2022); MOFCOM. (2021). *Hainan FTP Special Administrative Measures (Negative List) for Cross-Border Service Trade*. https://www.gov.cn/gongbao/content/2021/content_5641344.htm (accessed on 7 November 2022); NDRC and MOFCOM. (2020). *Hainan FTP Special Administrative Measures (Negative List) for Access of Foreign Investment*. http://big5.www.gov.cn/gate/big5/www.gov.cn/zhengce/zhengceku/2021-01/01/5576049/files/9094cbe2f89b41df8a2ec1cdf36f5f93.pdfhttp://en.pkulaw.cn/display.aspx?id=63ad3be152cb63adbdfb&lib=law&SearchKeyword=&SearchCKeyword=%B8%BA%C3%E6%C7嵥 (accessed

Industry policy catalogues and negative lists, which have been given binding effect by certain laws and regulations, including the FIL and its implementation regulations which came into force in 2020, play an important role in converting high-level industrial policy directions into detailed prescriptions for the treatment (restrictions, approval and conditions) of different types of investments. The main among these catalogues are the MA Negative List, the FI Negative List as well as the Negative List for Foreign Investment in Free Trade Zones[1022] (see Section 8.3.9.1).

8.3.9.1. PROJECT APPROVAL CATALOGUE AND MARKET ACCESS NEGATIVE LIST

Chinese state planners, led by NDRC, have long maintained control over investment in the country, prioritizing investments by SOEs or otherwise furthering state policy priorities. Over time, these efforts were focused on industries where state interests were more significant, and to create more space for the market to operate where significant state interests were not, or less, involved. This resulted in reforms to NDRC-led project approvals in 2004, in 2015 and in the years thereafter to enhance the focus and efficiency of state leadership over the economy.

In 2004, China reformed its investment approval regime by listing in the Project Approval Catalogue the industries in which investment (domestic and foreign) are subject to project approval by NDRC or its local counterparts. Fixed-asset investment outside the Project Approval Catalogue from then on would only require a filing with NDRC or its local counterparts, rather than ex ante project approval.

In October 2015, the State Council issued the Opinions of State Council on the Implementation of the MA Negative List, which aimed to consolidate industries listed in the Restructuring Catalogue[1023] and the Project Approval Catalogue into one comprehensive MA Negative List. Items 1-10 of the Project Approval Catalogue were directly quoted in the MA Negative List. When the Government revises the Restructuring Catalogue and the Project Approval Catalogue, the relevant items quoted in the MA Negative List will be updated accordingly[1024]. Only Items

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on 7 November 2022); NDRC and MOFCOM. (2022). *Catalogue of Industries Encouraged for Foreign Investment*. https://www.gov.cn/zhengce/2022-11/29/content_5730383.htm (accessed on 30 August 2023); NDRC. (2020). *Notice by NDRC of Further Deepening Reform and Effectively Completing the Work Concerning Foreign-Funded Projects in Response to the Epidemic Situation*. https://www.gov.cn/zhengce/zhengceku/2020-03/11/content_5490062.htmhttp://en.pkulaw.cn/display.aspx?id=5d6ebeea7e75fff6bdfb&lib=law&SearchKeyword=&SearchCKeyword=%D7%F6%BA%C3%CD%E2%D7%CA%CF%EEL%D3%C3%A4%D7%F7%B5%C4 (accessed on 7 November 2022).

1022 NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Access of Foreign Investment in Pilot Free Trade Zones*. https://www.gov.cn/zhengce/2022-11/28/content_5713318.htm (accessed on 7 November 2022).

1023 The Restructuring Catalogue was revised in December 2021, but the revisions only affected the Eliminated Category. See NDRC. (2019). *Catalogue for Guiding Industrial Restructuring (2019 Version)*. http://www.gov.cn/xinwen/2019-11/06/5449193/files/26c9d25f713f4ed5b8dc51ae40ef37af.pdf (accessed on 8 November 2022); see also NDRC. (2021). *Decision of NDRC to Revise the 2019 Catalogue for Guiding Industrial Restructuring*. https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/202201/t20220110_1311640.html?code=&state=123, https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/202201/P020220110571444649051.pdf (accessed on 8 November 2022).

1024 The State Council. (2015) *Opinions of State Council on the Implementation of the Market Access Negative List*. Article 14 and 15. https://www.gov.cn/zhengce/content/2015-10/19/content_10247.htm. (accessed on 6 September 2023).

11 and 12 of the Project Approval Catalogue, which relate to foreign investment and outbound investment, were not quoted in the MA Negative List and are only contained in the Project Approval Catalogue[1025].

The MA Negative List was first issued as a pilot program in 2016 and then officially adopted in 2018. It was amended in 2019, 2020 and 2022. The list ostensibly signals China's intention – one that has yet to be realized – to formally move toward implementing a uniform market access negative lists' system nationwide that provides de jure equal access to foreign and domestic investors and their investments, subject to any additional restrictions or prohibitions on foreign investment contained in FI Negative List.

Part I of the MA Negative List sets out industries where investment, domestic or foreign, is prohibited. Part II of the MA Negative List lists industries in which investment requires approvals from industry regulators or NDRC. By incorporating almost all relevant parts of the Project Approval Catalogue (with the exception of Items 11 and 12), the MA Negative List is supposed to serve as a comprehensive reference point for investors and officials to determine which investment projects require the approvals of industry regulators or NDRC before they may proceed. As discussed in Section 8.3.9 on the investment approval process, however, many other licensing or approval requirements may still apply. The MA Negative List also enables local authorities to develop detailed provisions that apply in local project approval processes[1026].

The excerpts below illustrate entries in the MA Negative List that require project approvals for investments, for example, in energy and machinery manufacturing.

101. Energy (under the 2022 MA Negative List) (excerpts) [1027]	
Hydropower stations	"[P]*rojects with a per-station installed capacity of 500 MW or above built on trans-boundary (cross-border) rivers or on rivers crossing provinces (autonomous regions or municipalities directly under the Central Government) are subject to the approval of the competent investment authority under the State Council, among which, projects with a per-station installed capacity of 3 GW or above or involving 10 000 residents or above to be displaced are subject to the approval of the State Council. Other projects are subject to the approval of local governments."*

1025 NDRC and MOFCOM (2022). MA Negative List, p. 2 and p. 47. https://www.ndrc.gov.cn/xwdt/tzgg/202203/P020220325360523452630.pdf (accessed on 11 August 2023).

1026 NDRC and MOFCOM. (2022). MA Negative List. https://www.ndrc.gov.cn/xwdt/tzgg/202203/P020220325360523452630.pdf (accessed on 7 November 2022).

1027 *Ibid.* The excerpts below are unofficial translations from LexisNexis, available at: https://hk.lexiscn.com/law/content_cnen.php?eng=0&provider_id=1&isEnglish=Y&origin_id=4211311&keyword=5biC5Zy65YeG5YWl6LSf6Z2i5riF5Y2V&t_kw=5biC5Zy65YeG5YWl6LSf6Z2i5riF5Y2V&prid=20b743d8-5810-4b53-bf09-4742a2bc92ce&crid=57592e37-45c7-47d0-acb6-36e25f02c90f (accessed on 7 September 2023).

Pumped-storage hydropower stations	"[Projects in this category shall be] *subject to the approval of provincial governments following the relevant planning of the State."*
Fossil-fuel power stations (including self-powered station)	"[Projects in this category shall be] *subject to the approval of provincial governments, among which, coal-fired or gas-fired thermal power projects are subject to approval within total quantity control-based development planning formulated by the State."*
Nuclear power stations	"[Projects in this category shall be] *subject to the approval of the State Council."*
Power grids	*"± 500 KV or above DC power projects for power transmission across borders or provinces (autonomous regions or municipalities directly under the Central Government), and 500 KV, 750 KV or 1 000 KV AC projects for power transmission across borders or provinces (autonomous regions or municipalities directly under the Central Government) are subject to the approval of the competent investment authority under the State Council, among which, ± 800 KV or above DC projects and 1 000 KV AC projects are to be filed with the State Council for records; ± 500 KV or above DC power projects for power transmission not across borders* [and] *not across provinces (autonomous regions or municipalities directly under the Central Government), and 500 KV, 750 KV, or 1 000 KV AC* [projects] *for power transmission not across borders [and] not across provinces (autonomous regions or municipalities directly under the Central Government) are subject to the approval of provincial governments following the relevant planning formulated by the State, while other projects are subject to the approval of local governments following the relevant planning formulated by the State."*
Coal mines	"[N]*ew coal development projects with an annual production capacity of 1.2 million tons or above in mining areas planned by the State are subject to the approval of the industry regulatory authority under the State Council, among which, new projects with a*[n annual] *production capacity of 5 million tons or above are subject to the approval of the competent investment authority under the State Council and are to be filed with the State Council for records; other coal development projects within mining areas planned by the State and general coal development projects are subject to the approval of provincial governments. Projects that are prohibited from development or listed as projects to be eliminated by the State must not be approved."*

Coal-to-fuel	"[C]*oal-to-natural gas projects with an annual output of over 2 billion cubic meters and coal-to-liquid projects with an annual output of over 1 million tons are subject to the approval of the competent investment authority under the State Council.*"
Imported liquefied natural gas receiving, storage or transportation facilities	"[N]*ew development projects (including expansion projects in other regions) are subject to the approval of the industry regulatory authority under the State Council, among which, newly-built projects with a receiving, storage or transportation capacity of 3 million tons or above are subject to approval of the competent investment authority under the State Council and are to be filed with the State Council for records. Other projects are subject to the approval of provincial governments.*"
Oil refining	"[P]*rojects to build new refineries and projects for expansion of* [primary processing] *refineries are subject to the approval of provincial governments following the relevant planning approved by the State. Projects to build new refineries and projects for expansion of* [primary processing] *refineries not included in the relevant planning approved by the State are prohibited from development.*"
105. Machinery Manufacturing (revised under the 2022 MA Negative List)	
Automobile	"[W]*ith the approval of the State Council, projects of newly-established Chinese-foreign car manufacturing joint ventures, projects of newly-established pure electric passenger vehicle manufacturers (including projects of existing automobile manufacturers switching to the production of pure electric passenger vehicles) and other automobile investment projects subject to the approval of provincial governments as specified in the Catalog of Investment Projects Subject to Government Approval (2016 Version) are no longer subject to administration based on approval but instead administration based on record-filing.*"[1028]
106. Light Industry	
Tobacco	"[C]*igarette projects and projects of cellulose diacetate fibers and tows for use in cigarettes are subject to the approval of the industry regulatory authority under the State Council.*"

[1028] NDRC. (2019). *Regulations on Administration of Investment in Automobile Industry*. http://www.gov.cn/gongbao/content/2019/content_5377111.htm (accessed on 7 November 2022); NDRC and MOFCOM. (2022). *MA Negative List*. https://www.ndrc.gov.cn/xwdt/tzgg/202203/P020220325360523452630.pdf (accessed on 7 November 2022).

If enterprises(s) invest in fixed assets, a project approval or project filing with NDRC or its local counterparts will be required[1029]. There is no explicit definition of '*fixed-asset investment*', and in general if the investment is for purposes of construction or production of something tangible (such as infrastructure, manufacturing facilities, real estate development or renovation, mining, energy and raw materials), it will be a fixed-asset investment.

In addition to investments in the categories listed above, certain other types of Chinese outbound investments, and foreign investments into China may also be subject to project approval[1030].

8.3.9.2. PROJECT APPROVAL OF FOREIGN INVESTMENT

Foreign investment flows to China must comply with the requirements under the FIL and its implementation regulation as well as with restrictions under the relevant foreign investment negative lists in China (see Section 8.2.3). As stated in Article 4 of the FIL, China applies the administrative system of pre-establishment national treatment plus negative lists to foreign investment[1031].

In addition, certain investments that would not be subject to project approval if conducted by domestic investors may nonetheless be subject to project approval if they are carried out by foreign investors. Item 11 of the 2016 Project Approval Catalogue determines which foreign investments are to receive additional project approval scrutiny. The additional project approval requirements give NDRC (or its local counterparts) additional levers to manage where and how foreign investment is used in the Chinese economy.

When a foreign investor seeks approval for a project, NDRC or local DRCs will first review whether the project falls within the scope of Item 11 of the 2016 Project Approval Catalogue. According to Item 11, a foreign investment project with a total investment of USD 300 million or more in the restricted sectors under the FI Negative List shall be subject to approval by NDRC. In addition, projects with a total investment of USD 2 billion or more shall also be subject to record-filing with the State Council. Foreign investment projects with a total investment of less than USD 300 million in the restricted sectors shall only be subject to approval by provincial DRCs[1032].

1029 State Council. (2017). *Regulations on the Administration of the Approval and Filing of Enterprise-Invested Projects*, Article 2. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MTMwNjU0NjFiZTA%3D (accessed on 7 November 2022); *see* also State Council. (2016). *Notice of State Council on Issuing the Catalogue of Investment Projects Subject to Government Approval*, Article 1. http://www.gov.cn/zhengce/content/2016-12/20/content_5150587.htm (accessed on 7 November 2022).

1030 State Council. (2016). *Catalogue of Investment Projects Subject to Government Approval*, Articles 11, 12. http://www.gov.cn/zhengce/content/2016-12/20/content_5150587.htm (accessed on 7 November 2022).

1031 NPC (2020). *Foreign Investment Law*, Article 4. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 30 August 2023).

1032 State Council. (2016). *Catalogue of Investment Projects Subject to Government Approval*, Article 11. http://www.gov.cn/zhengce/content/2016-12/20/content_5150587.htm (accessed on 7 November 2022).

In 2020, NDRC issued the Notice on Further Deepening Reform and Effectively Completing the Work concerning Foreign-Funded Projects in Response to the Epidemic Situation[1033], emphasising the implementation of the FI Negative List mechanism under the FIL, and harmonising investment volume thresholds with those in Item 11 of the Project Approval Catalogue. This means that foreign investment projects falling under the restricted category of the FI Negative List are still subject to project approval in line with Item 11 of the Project Approval Catalogue.

8.3.10. Step 3B – Project Filing

Fixed-assets investment projects that are not subject to the project approval are still subject to project filing requirements with local DRCs[1034]. Project filing is considered as a reduced burden on project investment, and it shall be completed via online platforms prior to the commencement of project construction[1035]. The filed project information shall generally include the profile of the project company, project name, construction location, construction scale, construction details, total project investment and a statement regarding the project's conformity with relevant industrial policies[1036].

8.3.11. Step 4 – Land, Zoning, and Construction[1037]

1033 NDRC. (2020). *Notice by NDRC of Further Deepening Reform and Effectively Completing the Work Concerning Foreign-Funded Projects in Response to the Epidemic Situation*. https://www.gov.cn/zhengce/zhengceku/2020-03/11/content_5490062.htm (accessed on 7 November 2022); NPC. (2020). *Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxZDUzMThhZjE0NWU%3D (accessed on 7 November 2022); State Council. (2020). *Regulations for Implementing the Foreign Investment Law*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NzRjN2EzZDAxNzc2YzUyODAxNDE2MTI%3D (accessed on 7 November 2022); NDRC and MOFCOM. (2022). MA Negative List. https://www.ndrc.gov.cn/xwdt/tzgg/202203/P020220325360523452630.pdf (accessed on 7 November 2022); NDRC and MOFCOM. (2021). *FI Negative List (2021)*. https://www.gov.cn/zhengce/2022-11/28/content_5713317.htm (accessed on 7 November 2022); NDRC and MOFCOM. (2021). *Special Administrative Measures (Negative List) for Access of Foreign Investment in Pilot Free Trade Zones*. https://www.gov.cn/zhengce/2022-11/28/content_5713318.htm (accessed on 7 November 2022); MOFCOM (2021). *Hainan FTP Special Administrative Measures (Negative List) for Cross-Border Service Trade*. https://www.gov.cn/gongbao/content/2021/content_5641344.htm (accessed on 7 November 2022); NDRC and MOFCOM. (2020). *Hainan FTP Special Administrative Measures (Negative List) for Access of Foreign Investment*. http://big5.www.gov.cn/gate/big5/www.gov.cn/zhengce/zhengceku/2021-01/01/5576049/files/9094cbe2f89b41df8a2ec1cdf36f5f93.pdf (accessed on 7 November 2022); NDRC and MOFCOM. (2022). *Catalogue of Industries Encouraged for Foreign Investment*. https://www.gov.cn/zhengce/2022-11/29/content_5730383.htm (accessed on 7 November 2022).

1034 State Council. (2017). *Regulations on the Administration of the Approval and Filing of Enterprise-Invested Projects*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MTMwNjU0NjFiZTA%3D (accessed on 7 November 2022); NDRC. (2014). *Administrative Measures for the Confirmation and Recordation of Foreign-Funded Projects*. https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/201405/W020190905494928065382.pdf (accessed on 7 November 2022).

1035 NDRC. (2023). *Measures for the Administration of Approval and Filing of Enterprise-Invested Projects*, Article 39. https://www.gov.cn/zhengce/2021-12/01/content_5752774.htm (accessed on 25 August 2023).

1036 *Ibid.* Article 40.

1037 See, e.g., Standing Committee of the NPC. (2018). *Law of the PRC on Environmental Impact Assessment*. https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYyMGU4OWVmZjE3MGE

After the project company obtains the project approval or project filing, usually no approval of the land authority is required for the company to acquire land use rights for construction of manufacturing facilities. But to construct manufacturing facilities is a complex process and the company needs to deal with various authorities in charge of land, zoning, construction, firefighting, environment, etc. on matters such as acquisition of land use rights through a public bidding process, design of the facilities, construction of the facilities, review of environment impact, firefighting, sanitation, etc. and various licenses/approvals could be required in such process. Although many local governments have taken some actions to try to simplify the process, it is still complex. The Lingang Free Trade Zone in Shanghai, where Tesla set up its factory, should be a good example in such regard[1038], but it still takes three phases and nearly 50 steps to obtain the land use rights, construct the facilities, and finally pass inspections of all relevant authorities in order to use the facilities in Lingang.

8.3.12. STEP 5A – POST-REGISTRATION LICENSING

Nearly 500 post-registration license or filing requirements remain. They cover matters such as manufacture and distribution of food and drug, telecommunication, hazardous materials, distribution of processed oil, operations of medical clinics, securities companies, and insurance companies[1039]. If a post-registration license or filing is required for certain activities, the company shall not conduct such activities without the license or filing.

8.3.13. STEP 5B – POST-REGISTRATION FILING

The general difference between a license and a filing is that a filing is easier to be achieved, and usually required for matters subject to less scrutiny. To take the distribution of medical devices as an example, a license is required for the distribution of Class 3 medical devices

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%3D (accessed on 7 November 2022); State Council. (2017). *Regulation on the Administration of Construction Project Environmental Protection.* https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MGYzN2JhMzBkYTc%3D (accessed on 7 November 2022); Standing Committee of the NPC. (2019). *Urban and Rural Planning Law of the PRC.* https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYyMTYxMjlkZDFhOTI%3D (accessed on 7 November 2022); Ministry of Natural Resources. (2019). *Circular of the Ministry of Natural Resources on Advancing the Reform of 'Combining Multiple Examination into one and Consolidating Multiple Certificates into One' for Land Use Planning Based on the 'Initiative for Synergy of Different Plans'.* http://www.gov.cn/xinwen/2019-09/20/content_5431591.htm (accessed on 7 November 2022); General Office of the State Council. (2019). *Implementation Opinions of the General Office of the State Council on Full-Scale Launch of Reform of the System of Review and Approval of Engineering Construction Projects.* https://www.gov.cn/zhengce/content/2019-03/26/content_5376941.htm (accessed on 7 November 2022); General Office of the State Council. (2018). *Notice of the General Office of the State Council on Launching the Pilot Program of the Reform of the Approval System for Construction Projects.* https://www.gov.cn/zhengce/content/2018-05/18/content_5291843.htm (accessed on 7 November 2022).

1038 The following was mentioned in a press briefing of the Shanghai government, "[Lingang Area of Shanghai] *take the lead in integrating the handling of the permits related to environmental assessment, water and soil conservation, and pollutant discharge* [...]. *From the Tesla case to the SMIC case*, [the authorities in handling administrative formalities] *in the engineering construction field in Lingang Area continue to break the record in showing 'Lingang Speed'".* Eastday.com. (2022). *Shanghai government's FAQs.* https://j.021east.com/p/1641866579049498/4548 (accessed on 11 November 2022).

1039 State Council. (2021). *Notice of State Council Regarding Deepening the Reform of Separating Permits from Business Licenses and Further Increasing the Development Vitality of Market Participants.* http://www.gov.cn/zhengce/content/2021-06/03/content_5615031.htm (accessed on 7 November 2022).

(medical devices with relatively high risk), a filing is required for the distribution of Class 2 medical devices (medical devices with medium risk), but neither license nor filing is required for the distribution of Class 1 medical devices (medical devices with relatively low risk)[1040].

8.3.14. Step 6 – Cybersecurity Review

The Cybersecurity Review Office is responsible for conducting the cybersecurity review. Members of the cybersecurity review working mechanism, as led by the Central Cyberspace Affairs Commission, include CAC together with NDRC, MIIT, MPS, MSS, MOF, MOFCOM, PBOC, SAMR, NRTA, CSRC, NASSP and OSCCA[1041].

When a critical information infrastructure ('*CII*') operator purchases cyber products or services, and when an Internet platform operator conducts data handling activities, if such products, services or activities affect or may affect national security, the involved parties must file a cybersecurity review declaration with the Cybersecurity Review Office[1042]. The cybersecurity review will consider factors including, among others, the risk of CII being controlled by a person without authorization or otherwise in violation of the law, disrupted or damaged after the products or services are used, and the damages posed by the interruption in supply of products or services on the business continuity of CII[1043].

8.4. Chapter Summary

Over the past four decades, China has liberalised market access for both domestic and foreign investment. However, the State still maintains significant control and influence over private investment through industrial policies, laws, regulations and approval processes for investment.

Chinese authorities use investment regulation as an important tool for supporting industrial policy goals, such as maintaining state control over key sectors (including by enabling and protecting SOEs through incentives as well as restrictions on private investment), bolstering domestic industry (by fostering indigenous innovation, promoting domestic champion companies and conducting industrial restructuring when the status quo is out of date) and attracting, but keeping in check, foreign investment (to fill gaps in the domestic economy and cultivate domestic industry capabilities).

Industrial policy goals are expressed and implemented during the investment screening process through (*i*) laws, regulations and policy documents that describe broad policy directions, as well as often in great detail and specificity, the role that different economic actors and resources should play; and (*ii*) the structure of and substantive criteria applied through the approval processes used to manage private investment. The detail and specificity of written policy

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1040 State Administration for Market Regulation. (2022). *Measures for Supervision and Administration of Business Operation of Medical Devices*, Article 4. http://www.gov.cn/zhengce/zhengceku/2022-03/23/content_5680762.htm (accessed on 7 November 2022).

1041 Cyberspace Administration of China, *et al.* (2021). *Measures on Cybersecurity Review*, Article 4. http://www.gov.cn/zhengce/zhengceku/2022-01/04/content_5666430.htm (accessed on 7 November 2022).

1042 Ibid, Article 2, 5 and 7.

1043 Ibid, Article 10.

prescriptions – as set out in detail in Section 8.3.1 on the investment approval process above – indicate that the Government continues to micromanage the country's economy.

The formulation of legal, regulatory, and policy measures, and the day-to-day management of approval processes relating to foreign investment are handled by a range of government agencies, including NDRC, SAMR, MOFCOM and other industry regulators charged with granting various licences (together with the local counterparts of these government agencies).

Although the Government is implementing reforms affecting both domestic investment and foreign investment – including an effort to unify the country's legal regime under the single, comprehensive FIL that codifies recent reform trends – these reforms do not reduce the role of the State in managing private investment. On the contrary, they appear to be used as a means to strengthen the hand of the state by making its influence over the economy more targeted and efficient.

PART II

DISTORTIONS IN THE PRODUCTION FACTORS

9. LAND

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9.1. INTRODUCTION

According to the Constitution, there is no private land ownership in China. The land is divided into urban land belonging to the State and rural or suburban land belonging to the collectives[1044]. Whereas there is no private land property, individuals and organisations can hold land-use rights ('*LUR*') which allow their holders to dispose of the land to some extent. LUR of urban land provide for more freedoms with regard to the purpose of use and are more easily transferable, while the rural LUR come with a number of limitations including a prohibition of non-agricultural use without pre-approval. The LUR can be traded under certain conditions.

Even though a number of laws appear to set clear rules with regard to land used for commercial purposes, those laws are in practice often not fully implemented. For example, there are legal provisions on the minimum price for land use and auctions, which could, in theory, ensure market-based prices and fair access to land in China. However, as discussed below, the application and implementation of these laws is far from being coherent: indeed, there is evidence that buyers (in particular SOEs) received their land for free or participated in tenders with only one participant, obtaining the land use rights at a very low price.

9.2. LEGAL FRAMEWORK

The process of nationalisation and collectivisation of land in China began in 1956, when the government institutionalized the collective ownership of rural land. The urban land was owned

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1044 Article 10 of the Constitution reads: "*Land in the cities is owned by the State. Land in the rural and suburban areas is owned by collectives except for those portions which belong to the State as prescribed by law; house sites and privately farmed plots of cropland and hilly land are also owned by collectives. The State may, in the public interest and in accordance with law, expropriate or requisition land for its use and make compensation for the land expropriated or requisitioned. No organization or individual may appropriate, buy, sell or otherwise engage in the transfer of land by unlawful means. The right to the use of land may be transferred according to law. All organizations and individuals using land must ensure its rational use.*"

by the State and reallocated to work units, '*danwei*'. As from the late 60s, '*joint state-private ownership*' was introduced in order to nationalize also non-land properties such as housing.

Under the Land Policy Reform of 1981, a new policy called Household Responsibility System was adopted in rural areas as of 1982. According to this system, rural collectives maintained the ownership but subcontracted their land out to individual households for a certain period of time in exchange for a percentage of their output[1045]. Although collective ownership was maintained, the farmers obtained much broader rights to rural land.

The Land Administration Law[1046] of 1986 laid down rules for land ownership by the State and the collective as well as rules on land expropriation. In 1988, the Land Administration Law was amended, and provisions were introduced allowing for the transfer of the right to use of both types of land[1047].

Legal rules specifying the modalities of the LUR' transfer were for the first time set out in the Provisional Regulations on the Assignment and Transfer of the Right to Use State-owned Land in Cities and Towns of 1990. The document specified the rules with respect to duration and conditions of LUR, the procedural aspects of the LUR transfer, as well as requisition by the State[1048].

One of the main developments with regard to the rural land was the adoption of the Law on Land Contract in Rural Areas[1049], which entered into force in 2003 and was amended in 2018. This law for the first time specified the rights of the farmers in Article 17, among which[1050]:

> *(1) in accordance with law, they have the right to use and enjoy benefits from the land covered by the contract as well as the right of autonomous organisation of production and exploitation and of production disposition.*
>
> *(2) in accordance with law, they have the right to exchange or transfer the right to exploit the land covered by the contract;*
>
> *(3) in accordance with law, they have the right to circulate the land operation right;*
>
> *(4) in accordance with law, they have the right to obtain compensation, in cases of legal requisition, expropriation or occupation of the land covered by the contract.*

1045 Wong, V. (May 2014), *Land Policy Reform in China: Dealing with Forced Expropriation and the Dual Land Tenure System* Centre for Comparative and Public Law Faculty of Law, The University of Hong Kong , Occasional Paper No. 25, May, p. 14; available at .https://ccpl.law.hku.hk/content/uploads/2018/03/Pub/OP/OP%20No%2025%20Vince%20Wong.pdf (accessed on 17 November 2022).

1046 Land Administration Law of the PRC of 25 June 1986, as amended, available at: https://www.fao.org/faolex/results/details/en/c/LEX-FAOC003560 (accessed on 20 October 2022).

1047 *Ibid.*, Article 2: '*No units of individuals may encroach on land or illegally transfer it through buying, selling or other means. However, the right to use of land may be transferred in accordance with law*'.

1048 Provisional Regulations on the Assignment and Transfer of the Right to Use State-owned Land in Cities and Towns, (original text in Chinese), promulgated on 19 May 1990 and amended on 29 November 2020. See in particular Chapters II – VII of the Regulations, available at: http://www.npc.gov.cn/zgrdw/npc/xinwen/2019-01/07/content_2070250.htm (accessed on 17 November 2022).

1049 Law of the PRC on Land Contract in Rural Areas (2002, last amended 2018).

1050 *Ibid.*, Article 17.

Other main changes included the requirement to produce a written contract (Article 22), the prohibition of land readjustment[1051] during the 30-year term of contract (Article 28) and an introduction of provisions on dispute resolution (Articles 55-65). The system still prohibited non-agricultural use of land (Articles 11, 18 and 63).

In 2007, the Property Law[1052] introduced an explicit distinction between ownership rights and use rights (including *usufructuary* rights, which in turn included the right of possession, the right of use and the right to seek profit from property owned by another party, Article 117). Holders of urban LUR enjoyed preferential treatment compared to rural LUR holders, as they were able to use land for "*constructing buildings, fixtures and their auxiliary facilities*" and to profit from them (Article 135). Urban LUR holders were also entitled to "*transfer, exchange, use as equity contributions, endow or mortgage*" their rights (Article 143). The Property Law was repealed in 2021[1053] and the provisions therein were incorporated into Articles 205-462 of the Civil Code which entered into force in January 2021[1054]. The Civil Code did not introduce any substantial changes with respect to LUR (see in particular Articles 246, 260-261 and 330-361 of the Civil Code).

In addition to the Civil Code, the LUR in China are governed by a large number of further legislative acts, in particular the above-mentioned Land Administration Law and its implementing regulations[1055], as well as the Law on Urban Real Estate Administration[1056], the above-mentioned Provisional Regulations on the Assignment and Transfer of the Right to Use

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1051 Ping Li, J.D. (2003), 'Rural land tenure reforms in China: issues, regulations and prospects for additional reform', Land Reform 2003/3, special edition., Land readjustment can refer to comprehensive or 'large' readjustments where all farmland in the village is given back to the collective and reallocated again, so farmers are reallocated a different land. 'Small' or 'partial readjustments' mean adding or taking land from a household when the size of the household changed. available at: http://www.landesa.org/wp-content/uploads/2011/01/LP-RuralLandTenureReforms.pdf (accessed on 17 November 2022).

1052 Property Law of the PRC of 16 March 2007, available at: http://www.npc.gov.cn/zgrdw/englishnpc/Law/2009-02/20/content_1471118.htm (accessed on 17 November 2022).

1053 See Article 1260 of the Civil Code.

1054 Available at: http://english.www.gov.cn/archive/lawsregulations/202012/31/content_WS5fedad98c6d0f72576943005.htm (accessed on 17 November 2022).

1055 Regulation on the Implementation of the Land Administration Law of the PRC of 27 December 1998, as amended, available at: https://www.fao.org/faolex/results/details/en/c/LEX-FAOC170451 (accessed on 17 November 2022).

1056 Law of the PRC on Urban Real Estate Administration of 5 July 1994, as amended, available at: http://www.lawinfochina.com/Display.aspx?LookType=3&Lib=law&Cgid=96792&Id=6353&SearchKeyword=&paycode (accessed on 17 November 2022). Further rules on the administration and use of land can be found, among others, in the Regulation on the Administration of the Overall Planning of Land Usage of2 May 2017, available at: http://extwprlegs1.fao.org/docs/pdf/chn166185.pdf (accessed on 17 November 2022), Administrative Measures for the Preliminary Examination of Land Use for Construction Projects of 29 November 2008, as amended (Note: these measures were first adopted on 28 June 2001), available at: http://www.lawinfochina.com/display.aspx?id=7306&lib=law&EncodingName=big5 (accessed on 17 November 2022) and Regulation on the Administration of Annual Planning of Land Usage of 19 December 2006, (Note: this regulation was first adopted on 24 February 1999), as amended, available at: http://extwprlegs1.fao.org/docs/texts/chn70321.doc (accessed on 17 November 2022).

State-owned Land in Cities and Towns and the Provisions on the Assignment of State-owned Construction Land Use Right through Bid Invitation, Auction and Quotation[1057].

In addition, LUR are subject to a wider set of planning and policies, in line with Article 4 of the Land Administration Law which stipulates that "[t]*he State formulates overall plans for land utilization in which to define the purposes of use of land* […]". The most significant among those policy documents being the 13th FYP on Land Resources[1058], the 14th FYP and the Outline of National Overall Land and Spatial Planning (2016 – 2030)[1059] (see Section 9.3.) which set out a number of targets concerning the agricultural land and construction land in specific localities to be in place by 2030. Furthermore, the government controls the supply of land by setting a quota of the land area for which LUR can be sold for industrial or residential purposes, by province and by year[1060].

9.3. Planning Policy Documents on Land Resources

The 13th FYP on Land Resources included a number of provisions strictly controlling the allocation and prices of land use.

According to Chapter 3, Section 6 of this FYP, entitled "*Deepening the reform of land management*", China would introduce an '*experimental*' allocation of industry land use, reduce the cost of land use and control land supply to certain sectors: "*foster the market allocation experiments for industry land use and effectively reduce the economic cost of land use;* […] *strictly control the land supply to steel, coal and other sectors in overcapacity as well as to "zombie enterprises"* […]". Furthermore, the plan provided for improvements of the system of payable land use: "*further expand the scope of payable use of state-owned land, reduce transfers to non-public use and improve the management system applicable to transferred use of state-owned land.*"

Chapter 4, Section 13 provided for preferential land supply to a number of strategic industries: "*strengthen the coordination of land use with industry, further adjust the land use structure for industry land use, give priority to providing land for development purposes to emerging strategic industries and modern service business etc.*"

The Chinese authorities have not published a 14th FYP on land resources. However, the 14th FYP contains some provisions on land resources, such as the instruction to: "[a]*dhere to*

1057 Provisions on the Assignment of State-owned Construction Land Use Right through Bid Invitation, Auction and Quotation; Order of the Ministry of Land and Resources (No.39) of28 September 2007, available at: http://www.lawinfochina.com/display.aspx?lib=law&id=6435&CGid=# (accessed on 17 November 2022).

1058 13th FYP on Land Resources (12 April 2016), available at: https://www.mnr.gov.cn/gk/ghjh/201811/t20181101_2324898.html (accessed on 17 November 2022).

1059 Outline of National Overall Land and Spacial Planning 2016—2030 (1 January 2016), available at: https://leap.unep.org/countries/cn/national-legislation/outline-national-overall-land-and-spacial-planning2016-2030 (accessed on 17 November 2022).

1060 According to a Government's statement in a Commission trade defence investigation: "*The government of the PRC also controls the supply of land, by restricting by quota the area of land for which land use rights can be sold for industrial or residential purposes, by province and by year.*" See Commission Implementing Regulation (EU) No 1379/2014 of 16 December 2014 imposing a definitive countervailing duty on imports of certain filament glass fibre products originating in the PRC and amending Council Implementing Regulation (EU) No 248/2011 imposing a definitive anti-dumping duty on imports of certain continuous filament glass fibre products originating in the PRC, *OJ L 367, 23.12.2014, p. 22–81,* recital 191.

measures according to local conditions and multiple measures at the same time, consolidate the main responsibility of the urban government, and stabilize land prices, housing prices and expectations. Establish a linkage mechanism for housing and land, strengthen real estate financial regulation and control, give play to the role of housing tax regulation, support reasonable self-occupation demand, and curb investment speculative demand"[1061].

Moreover, the government interference into land allocation clearly transpires from the Outline of National Overall Land and Spatial Planning (2016 – 2030): "*Ensure the necessary land for economic and social development. Give full play to the overall control role of overall land use planning and land use plans, and rationally arrange the scale, layout, structure and timing of construction land. Priority will be given to ensuring land for people's livelihood projects such as relocation for poverty alleviation and relocation, as well as for projects in strategic emerging industries and modern service industries, and rationally arrange land for key infrastructure projects*"[1062].

9.4. Acquisition of Land-Use Rights

Urban LUR can be '*assigned*' or '*allocated*'[1063]. In both cases, the decision on the transfer of LUR is taken by local government bodies. Assigning the LUR represents the default option for acquiring them. The assigned LUR are subject to payment of assignment fee[1064] and the following maximum term limitations[1065] apply:

- 70 years for residential purposes;
- 50 years for industrial purposes;
- 50 years for the purpose of education, science, culture, public health and physical education;
- 40 years for commercial, tourist and recreational purposes; and
- 50 years for comprehensive use or other purposes[1066].

By contrast, the allocation of LUR is limited to the following situations:

(1) Land used for state organs or military purposes;
(2) Land used for urban infrastructure or public utilities;
(3) Land used for projects of energy, communications or water conservancy, etc. which are selectively supported by the state; and
(4) Land used for other purposes as provided by laws or administrative rules and regulations[1067].

1061 See 14th FYP, Chapter 29, Section 4.
1062 See Outline of National Overall Land and Spacial Planning (2016 – 2030), Chapter VIII, Section 2.
1063 See Chapter II of the Law on Urban Real Estate Administration, as amended.
1064 *Ibid.*, Article 8.
1065 Farmland use is subject to specific term limitation pursuant to Articles 330 - 332 of the Civil Code.
1066 Article 12 of the Provisional Regulations on the Assignment and Transfer of the Right to Use State-owned Land in Cities and Towns.
1067 Article 24 of the Law on Urban Real Estate Administration, as amended.

The allocated LUR may require payment of compensation or a resettlement fee, but can also be granted for free, with the state authorities having the discretion over the payment[1068]. The right to use allocated land has no time limit[1069].

The local government bodies may assign a land-use right by means of an agreement, an invitation to bid or an auction with the exact procedure being decided at the provincial, autonomous region or municipality level[1070]. Article 347 of the Civil Code provides for a legal obligation to auction or use a bidding process to assign land used for commercial purposes: "*The bidding, auction, or other means of public bidding shall be adopted in assigning a lot of land used for business purposes, such as for industrial, commercial, tourism, recreational, and commercial residential purposes, or where there are two or more intended users competing for the right to use the same lot of land*". The same provision stipulates that "[t]*he creation of a right to use a lot of land for construction purposes by way of gratuitous grant is strictly restricted*".

However, in certain circumstances assignment of LUR can be done by means of a bilateral negotiation. Indeed, Article 13 of the Law on Urban Real Estate Administration repeats the default option to auction land but combines this principle with an exception: "[For] *land used for commercial,* [...] *purposes, where conditions permit, the means of auction or bidding shall be adopted; where conditions do not permit and it is impossible to adopt the means of auction or bidding, the means of agreement between the two parties may be adopted*"[1071].

The land use rights can be transferred – as well as mortgaged, contributed into a company's capital, exchanged etc. - by means of a written contract[1072]. When the term of LUR expires, the holder can apply for renewal, subject to governmental approval[1073], except for the categories of LUR renewed automatically in line with Article 359 of the Civil Code.

In principle, access to bidding for LUR destined for construction purposes should be open to all natural persons, legal persons and other organisations inside and outside of China[1074].

1068 *Ibid.*, Article 23: '*Allocation of the land-use right refers to acts that the people's government at or above the county level, after the land user has paid compensation and expenses for resettlement, etc., approves in accordance with the law to allocate the land to the land user or gratuitously allocates the land-use right to the land user.*'

1069 *Ibid.*

1070 *Ibid.*, Article 12.

1071 Article 13 of the Law on Urban Real Estate Administration, as amended.

1072 See Chapter XII of the Civil Code, in particular Articles 353 and 354.

1073 Article 41 of the Provisional Regulations on the Assignment and Transfer of the Right to Use State-owned Land in Cities and Towns.

1074 Article 11 of the Provisions on the Assignment of State-owned Construction Land Use Right through Bid Invitation, Auction and Quotation: "*Unless it is otherwise prescribed by any law or regulation, all the natural persons, legal persons and other organizations inside and outside the territory of the PRC may apply for the participation in the assignment of state-owned construction land use right through bid invitation, auction or quotation*". Article 3 of the Provisional Regulations on the Assignment and Transfer of the Right to Use State-owned Land in Cities and Towns: "*Any company, enterprise, other organization and individual within or outside the PRC may, unless otherwise provided by law, obtain the right to the use of the land and engage in land development, utilization and management in accordance with the provisions of these Regulations*".

The reality is, however, different. First, it is common practice that only a number of bidders or participants (in case of auctions) are allowed to participate, instead of accepting all parties that registered[1075]. Second, access to land can be encouraged or restricted in certain cases. For example, and as set out above in Section 9.3., in the steel sector, the access to industrial land is by law limited only to companies respecting the industrial policies set by the State (see also Section 14.1.1.2). Article 24 of the Development Policies for the Iron and Steel Industry sets out: "*For any project that fails to comply with the iron and steel industry development policies and has not been approved or where its approval breaches relevant provisions, the national land and resources department shall not handle the formalities for land-use rights*"[1076].

Similarly, Article 12 of Decision No. 40 (see Section 4.2.9) includes provisions on access to land based on the government investment policy: "*The 'Guidance Catalogue for the Industrial Structure Adjustment' is the important basis for guiding investment directions, and for the governments to administer investment projects, to formulate and enforce policies on public finance, taxation, credit, land, import and export, etc.*" Article 18 of Decision No. 40 makes clear that industries that are '*restricted*' will not have access to land use rights[1077].

Moreover, some official documents favour SOEs. A typical example represent the Opinions of the Ministry of Land and Resources on Further Control over Land Assets and Promotion of the Reform and Development of State-owned Enterprises[1078], which provide that the State may allocate land to pillar SOEs in key industries as state investment. In other words, SOEs even get a better right to land-use, as the Opinions encourage allocation instead of assignment only.

More recently, the Ministry of Land and Resources[1079] adopted the Opinions on Expanding the Scope of Paid Use of State-owned Land[1080]. It did so with the aim of narrowing the scope of land allocation: "*The scope of allocated land shall be gradually narrowed in accordance with the requirements of the reform of the investment and financing system, state-owned enterprises and public institutions, agricultural reclamation and other relevant fields*". Note, however, that

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1075 See the findings in Commission Implementing Regulation (EU) 2017/366 of 1 March 2017 imposing definitive countervailing duties on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the PRC following an expiry review pursuant to Article 18(2) of Regulation (EU) 2016/1037 of the European Parliament and of the Council and terminating the partial interim review investigation pursuant to Article 19(3) of Regulation (EU) 2016/1037, recital 426.

1076 Development Policies for the Iron and Steel Industry (original text in Chinese), Order No. 35 of the NDRC, promulgated in 2005, available at: http://www.gov.cn/flfg/2006-01/17/content_161597.htm (accessed on 6 December 2022).

1077 "*The new investments project under the restricted category shall be prohibited. The investment administrative department shall not examine, approve, ratify or archive the projects under the restricted category. No financial institution shall grant loans for such projects, and no administrative department of land administration, urban planning, construction, environmental protection, quality inspection, fire prevention, customs, or industry and commerce, etc. shall handle the relevant procedures for such projects*".

1078 Several Opinions of the Ministry of Land and Resources on Further Control over Land Assets and Promotion of the Reform and Development of State-owned Enterprises (1999).

1079 In 2018, the Ministry of Land Resources has been replaced by the Ministry of Natural Resources.

1080 Opinions of the Ministry of Land and Resources, the National Development and Reform Commission, the Ministry of Finance and Other Departments on Expanding the Scope of Paid Use of State-owned Land, (2016).

the Opinions on Further Control over Land Assets and Promotion of the Reform and Development of State-owned Enterprises have not been repealed.

Last but not least, there are also provisions in place providing for favourable access to land for foreign investors, as long as they comply with the State planning policies: "*Provided economic and social development planning, overall land-use planning and overall urban planning are complied with, priority shall be given to guaranteeing the construction land use quotas needed by the foreign investment projects in national-level development zones, so that all such quotas that should be guaranteed are actually guaranteed*"[1081].

9.5. Land-Use Rights Pricing

In principle, the system of bidding and auction should allow the market to judge the price of a particular land-use right, since bidding and auctioning[1082] represents the default mechanism for the transfer of LUR, to be used whenever conditions permit[1083]. Bilateral negotiations, on the other hand, are only reserved for the remaining situations when the conditions do not allow bidding or auctioning. Nevertheless, even when LUR are granted via bilateral negotiations, the fee may not be lower than the minimum price set by the state regulations[1084]. In sum, according to generally applicable rules, the price of LUR should be set independently and correspond to their actual market value.

However, in reality, provision of land at lower than market prices remain a consistent policy of the Chinese authorities, particularly when it comes to selected industries of interest to the State. The practice of granting preferential access to land to selected sectors or individual companies is apparent from existing government policies, such as the fourth pillar of SSSR[1085], '*Lowering corporate costs*' which includes also provisions on lowering the cost of land. As a practical consequence of this policy, some provinces, for example Guangdong, introduced preferential rules on granting land for specific industries: "[a]*s regards Guangdong's industries to be developed in priority as well as land-use-intensive manufacturing industries, the reduced price of land transfer can amount to 70% of the lowest standard price of land for industrial use, depending on where the piece of land is located*"[1086]. The Shaanxi implementation of SSSR contains a similar clause: "[a]*s regards the land used by industry projects in the field of strategic emerging industries, advanced manufacturing industries and IT economy and complying with*

1081 See Article 3.10 of the Notice of the State Council on Several Measures for Promoting the Growth of Foreign Investment (2017), available at: http://www.gov.cn/zhengce/content/2017-08/16/content_5218057.htm (accessed on 6 December 2022).

1082 Cai H., Wang Z., & Zhang Q. (2017), To build above the limit? Implementation of land use regulations in urban China. *Journal of Urban Economics*, *98*, 223–233., available at: https://www.sciencedirect.com/science/article/pii/S0094119016000231 (accessed on 6 December 2022).

1083 Article 13 of the Law on Urban Real Estate Administration.

1084 *Ibid.*, Article 13, paragraph 3: '*Fees for granting the land-use right by means of agreement between the two parties shall not be lower than the lowest price determined in accordance with the regulations of the State.*'

1085 Echoed also in Section I.2.1 of the 14th national FYP.

1086 Notice of the Guangdong Province People's Government on issuing Several Policies and Measures in Guangdong Province to Reduce the Cost of Manufacturing Enterprises and Support the Development of the Real Economy 2017/90, available at: www.jieyang.gov.cn/attachment/0/19/19224/166997.pdf (accessed on 16 January 2023).

the Shaanxi Province industry orientations, the minimum price benchmark f land used for industry purposes may be applied"[1087].

To date, the authorities set the land-use right prices according to the Urban Land Evaluation System[1088], which instructs them, among other criteria, to consider also industrial policy when setting the price of industrial land[1089].

Also findings in the Commission's past trade defence investigations ('*TDI investigations*')[1090] (see further Section 9.7) confirmed that the land prices tracked by the urban land price dynamic monitoring system[1091] operated by the Ministry of Natural Resources are higher than the minimum benchmark prices set by the Urban Land Evaluation System. This is because the benchmark prices set by the urban land evaluation system are updated only every three years, while the dynamic monitoring system updates prices quarterly. However, the prices paid for the transfer of land use rights are not based on the dynamic monitoring system[1092]. According to the Government, the urban land price dynamic monitoring system is designed to assess the evolution of land prices, not serve as a benchmark for starting prices in biddings and auctions[1093]. The considerable difference between the prices indicated by the dynamic monitoring system (which indicates the up-to-date prices) and the prices set by the urban land evaluation system shows that the minimum prices set by the State are below market value of the land-use-rights. Thus, any transactions that actually proceed on the basis of the minimum prices set by the State will likely be at less than market value.

The inadequacies of setting the price for land-use price have not escaped the Government's attention. In fact, the Government, recognising already in 2014 that China might be in breach of its international legal obligations and in particular the WTO rules, introduced a prohibition on preferential land pricing[1094]:

> *It is necessary to focus on current situations, set clear priorities, resolutely abolish preferential policies that are in violation of laws and regulations to ensure that they*

1087 See Article 28, Shaanxi People's Government Notice as to preparing an action plan for supply-side structural reforms and cost reduction, Shaanxi Government 2016/38, 22 September 2016, available at: http://www.shaanxi.gov.cn/zfxxgk/fdzdgknr/zcwj/szfwj/szf/201609/t20160922_1668315_wap.html (accessed on 29 March 2023).

1088 See Article 3 of the Circular of the State Council on Strengthening the Asset Management of State-Owned Lands, Guo Fa [2001] No. 15,(original text in Chinese), available at: http://www.gov.cn/gongbao/content/2001/content_60846.htm (accessed on 7 December 2022)..

1089 See the findings in Council Implementing Regulation (EU) No 215/2013 of 11 March 2013, imposing a countervailing duty on imports of certain organic coated steel products originating in the PRC.

1090 Commission Implementing Regulation (EU) 2017/366 of 1 March 2017 imposing definitive countervailing duties on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the PRC following an expiry review pursuant to Article 18(2) of Regulation (EU) 2016/1037 of the European Parliament and of the Council and terminating the partial interim review investigation pursuant to Article 19(3) of Regulation (EU) 2016/1037, recital 425.

1091 Land prices are published on a quarterly basis for 105 Chinese cities.

1092 Commission Implementing Regulation (EU) No 1379/2014 of 16 December 2014 imposing a definitive countervailing duty on imports of certain filament glass fibre products originating in the PRC and amending Council Implementing Regulation (EU) No 248/2011 imposing a definitive anti-dumping duty on imports of certain continuous filament glass fibre products originating in the PRC, recital 190.

1093 Ibid., recitals 424-425.

1094 See Sections II.2.2. and III.2. of the State Council Notice on Cleaning up and Standardising Tax and Other Preferential Policies; State Council Legal Affairs Office 2014/62.

are in line with the rules of the World Trade Organisation and China's commitments to the international community, and gradually standardise other preferential policies.

The following activities are strictly prohibited: reducing, waiving or deferring the levy of administrative and institutional fees and contributions to government fundsto be paid by enterprises, or transferring land parcels to enterprises at discounted prices or zero land price in violation of applicable provisions.

However, a subsequent State Council notice issued in 2015 refers to the 2014 notice and indicates that it should be "*carried out subject to separate future arrangements*", thus effectively postponing this effort to prohibit preferential land pricing[1095].

9.6. Rural Land

In addition to the non-transparent and often inadequately implemented rules concerning use of non-agricultural land described in the previous two sections, the specific regulations governing the ownership, use and conversion of farmland add another layer of complexity to the administration of land-related rights in China.

Farmland is owned by the village collectives and an overall principle of protecting farmland is in place: "[t]*he State protects cultivated land and strictly restricts conversion of cultivated land to non-cultivated land*"[1096]. The village collectives enter into land-use agreements with individuals. The duration of such contracts ranges from 30 to 70 years depending on the type of farmland and they can be renewed upon expiry[1097]. The permitted uses include crop cultivation, forestry or animal husbandry[1098].

By contrast, the collectives cannot contract the land out for non-agricultural purposes, as only state-owned urban land can be assigned for non-agricultural use and, correspondingly, non-agricultural use of rural land is prohibited unless there is a governmental approval[1099]. Thus, collectively owned land first has to be converted to state-owned land before the LUR can be granted for non-agricultural purposes.

A specific expropriation procedure is foreseen for such land-use conversion. Pursuant to Article 2 of the Land Administration Law, "[t]*he State may, in the interest of the public, lawfully expropriate or requisition land and give compensation accordingly*." The '*interest of the public*' was initially not defined in the law and was introduced only in the 2019 amendment, specifying public interest as government infrastructure, public services, affordable housing and similar[1100]. The compensation for the expropriated land *"shall be paid in full in a timely manner in accordance with law"*[1101]. Further provisions regulating the expropriation and compensation can be found in the Civil Code, the Law on Urban Real Estate Administration, and the Land

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1095 State Council Notice on Issues concerning Taxation and Other Preferential Policies (2015).
1096 Article 30 of the Land Administration Law, as amended.
1097 Article 332 of the Civil Code.
1098 Article 331 of the Civil Code and Article 13 of the Land Administration Law.
1099 Article 13, as well as Chapter IV of the Land Administration Law and Article 334 of the Civil Code.
1100 SeeAmendment to the Land Administration Law 2019, available at: https://perma.cc/V5SS-KJHP (accessed on 7 December 2022).
1101 Article 243 of the Civil Code.

Administration Law. However, in the past, the application of the rules on expropriation and compensation has been riddled with problems and, rather than providing a clear-cut framework for conversion between categories of land, contributed to widely reported social tensions and financial irregularities, in particular at the provincial administration level.

To begin with, the largest part of the compensation, the land compensation fee, was set in the Land Administration Law at 6-10 times the average annual agricultural output value of the expropriated land[1102], which in many cases was far below the market value that the private developers are willing to pay for the plot. Also, the compensation has reportedly been minimal in many cases, leading at times to land grabs and forced evictions causing social unrest. For example, the majority of '*mass incidents*' that occurred in China in the early 2000s were due to land disputes with the local governments[1103], in particular expropriation of farmland[1104]. According to some estimates, 6-7 million hectares of farmland were expropriated for urban or commercial use, and 50-60 million rural residents were affected by land expropriation. A large proportion of farmers were not receiving any compensation and the rest receiving just a small percentage (2.5%) of the market value of the land[1105]. The 2019 Land Administration Law no longer contains such provision. The Civil Code just generally requires that "*the compensations for the land expropriated, subsidies for resettlement and compensations for rural villagers' residence, other attachments, young crops on land, etc. shall be paid in full and in time according to law*"[1106].

Moreover, the restrictions in LUR led to the development of the so-called '*minor property rights*'. This term is used to describe situations when the rural land-use owners sell their LUR to private developers, even though formally this is not legal, or construct buildings on their land in order to rent out units (doing this on their own or in conjunction with a private developer)[1107]. Since sale of rural LUR for construction of rental property violates the restriction on the use of rural land as explained above, the agreements are legally void. The buyers of those rights risk that at any moment the land might be taken away from them or the buildings demolished. However, it seems that the economic incentive of revenues from rental still outweighs the legal risks, as there are a large number of such semi-legal transfers of LUR. According to an estimate from 2014, this type of housing remained common, especially around major cities such as Beijing, Shanghai and Shenzhen, going even up to half of all housing around some of the larger cities in China [1108]. In 2017, the housing area of all cities and towns in the country, including minor property rights houses, was 29.8 billion square meters, of which the area of minor property rights houses was estimated at 7.3 billion square meters, accounting for 24%, second

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1102 Article 47 of the Land Administration Law, See further Article 338 of the Civil Code.

1103 Wong, V. (2014), *Land Policy Reform in China: Dealing with Forced Expropriation and the Dual Land Tenure System*, Centre for Comparative and Public Law Faculty of Law The University of Hong Kong, Occasional Paper No. 25, May 2014, page 3.

1104 Ping L. (7 October 2021), How China's landmark law changes help protect farmland and farmers' rights, available at: https://www.scmp.com/comment/opinion/article/3151321/how-chinas-landmark-law-changes-help-protect-farmland-and-farmers (accessed on 7 December 2022).

1105 Wong, V., page 3

1106 See Article 234 of the Civil Code.

1107 Wong, V., page 41.

1108 *Ibid.*, page 3, p. 43.

only to the area of commercial housing, which accounted for 38%[1109]. According to some sources, there were a total of 50 million '*minor property rights houses*' in China in 2018[1110].

All these issues are ultimately related to the institutional model in which various levels of administration heavily depend on the transformation of rural land into construction plots given the enormous increase in value associated with such conversion. Sales of LUR to private developers and businesses constitute a large proportion of local governments' income. In 2013, land revenue (including LUR transfer fees, property-related taxes, etc.) accounted for 87.5% of local government's total income, and 61% of local government revenue could be attributed to the LUR transfer fees[1111]. For 2020, a figure of 55% of the central and local governments' fiscal income originating from land transactions has been reported[1112], as well as a figure of 84% of total revenue for local governments[1113]. For 2021, sources indicate the proportion of land transfer revenue to local government revenue as high as 41.5%[1114]. The reliance on income from land transactions differs however significantly from province to province[1115].

The dependency of local governments on income from land transaction is, as of writing of this Report, attracting much attention of Chinese authorities, not least in view of the recent tax reforms and the turmoil on the real estate market in China since 2021[1116]. The 2021 Government announcement that proceeds from land sales at local level should be collected by national taxation bureaus, rather than by land and resources bureaus in local governments[1117], appears intended to strengthen the central authorities' control over land resources and the income, as well as possible financial imbalances, generated by this sector of economy. All this shows that

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1109 See at: http://www.xinhuanet.com/legal/2020-06/23/c_1126147757.htm (accessed on 28 March 2023).

1110 'Will small-ownership houses be "orderly regularized" or "completely demolished"? The voice of the country is huge', available at: https://new.qq.com/omn/20210927/20210927A08S9800.html (accessed on 7 December 2022).

1111 See at: http://finance.cnr.cn/jjgd/20150902/t20150902_519745033.shtml (accessed on 13 December 2022).

1112 Kawate I. - Real estate is king for China's cities as tax revenues stumble (21 February 2021), available at: https://asia.nikkei.com/Economy/Real-estate-is-king-for-China-s-cities-as-tax-revenues-stumble (accessed on 8 December2022).

1113 Qiao L. and Chingman - China's Central Government Moves to Take Back Leased Rural Land (31 August 2021), available at: https://www.rfa.org/english/news/china/rural-land-08312021093341.html (accessed on 26 January 2022).

1114 See at: https://pdf.dfcfw.com/pdf/H3_AP202204061557634061_1.pdf?1649272115000.pdf (accessed on 28 March 2023).

1115 Woo R. and Liangping G., China's land sales slump for second month as property chill bites, available at: https://www.reuters.com/world/china/chinas-land-sales-slump-second-month-developers-stay-away-2021-10-22/ (accessed on 8 December 2022).

1116 See, for example, China Land Sales Remain Sluggish Even as Bidding Rules Eased, 29 December 2021, available at: https://www.bloomberg.com/news/articles/2021-12-29/china-land-sales-remain-sluggish-even-as-bidding-rules-eased (accessed on 18 January 2022); It's not just Evergrande. Smaller Chinese real estate developers are also wobbling as the cash crunch spreads (23 December 2021), available at: https://www.businessinsider.com/evergrande-crisis-other-china-property-developers-in-trouble-outlook-2021-12 (accessed 8 December 2022 2022); Tang F. ,China property: tax authorities' enhanced oversight of land-sale revenue seen as 'mixed bag', and runaway prices may drop (8 June 2021), available at: https://www.scmp.com/economy/china-economy/article/3136504/china-property-tax-authorities-enhanced-oversight-land-sale (accessed on 8 December 2022).

1117 See Qiao, L. and Chingman.

the Chinese system of LUR continues to be in flux, in particular when it comes to transferring rural land into the urban land pool[1118].

9.7. Findings in Past TDI Investigations

The inconsistencies in the transfer of LUR as described above have also been mirrored in the findings of past TDI investigations.

Firstly, some SOEs received the LUR for free[1119]. Moreover, the Commission found that the while some enterprises paid for the land-use right, those fees were subsequently refunded by the local authorities[1120], or needed to be paid only after a long period of time: "*Moreover, the Commission also found that some companies received refunds from local authorities to compensate for the prices, which they paid for the* [LUR]. *Furthermore, some of the* [LUR] *obtained by companies in the CNBM Group only had to be paid several years after the* land *had been put into use*"[1121].

Secondly, in a number of cases it was questionable whether an auction actually took place, as the only participant was the company who was granted the contract at the auction starting price. In one case, the Commission was also not able to find any proof of an actual auction taking place, including the procedural step of publishing the formal public notice[1122]. In the instances where the Commission was able to find public bid notices, there were considerable discrepancies with the legal requirements[1123]:

> *During the verification of sampled exporting producers, the Commission obtained some notices issued by relevant authorities concerning* [LUR] *available for*

1118 See The China Dashboard, Winter 2021 – The Final Quarter: Land, Land Policy Reform.

1119 See, for example, Commission Implementing Regulation (EU) 2017/969 of 8 June 2017 imposing definitive countervailing duties on imports of certain hot-rolled flat products of iron, non-alloy or other alloy steel originating in the PRC and amending Commission Implementing Regulation (EU) 2017/649 imposing a definitive anti-dumping duty on imports of certain hot-rolled flat products of iron, non-alloy or other alloy steel originating in the PRC, recital 287. Free provision of land to enterprises in order to attract investment is also confirmed by additional sources, see Ahuja A.; Chalk, N.A.; Porter N.; N'Diaye P. and Nabar M. (2012), *An End to China's Imbalances?* IMF Working Papers, Working Paper No. 12/100.

1120 "*It was also found that some sampled exporting producers received refunds from local authorities to compensate for the (already low) prices which they paid for the* [land-use rights]." Council Implementing Regulation (EU) No 1239/2013 of 2 December 2013 imposing a definitive countervailing duty on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the PRC, recital 365.

1121 Commission Implementing Regulation (EU) 2020/776 of 12 June 2020 imposing definitive countervailing duties on imports of certain woven and/or stitched glass fibre fabrics originating in the People's Republic of China and Egypt and amending Commission Implementing Regulation (EU) 2020/492 imposing definitive anti-dumping duties on imports of certain woven and/or stitched glass fibre fabrics originating in the People's Republic of China and Egypt, recital 498.

1122 Council Implementing Regulation (EU) No 1239/2013, recital 357: "*During the verification the Commission requested from the government evidence to support its claims concerning the transfers of LUR in China is assigned through bidding, quotation or auction. It is noted that according to Article 11 of Provisions on Assignment of the State-owned Construction Land Use Right through Bid Invitation, Auction and Quotation the responsible state authority issues public notice whenever the bidding/auction/quotation process takes place. On this basis, the Commission requested all public notices for the transactions which were subject to these procedures in order to collect and verify information requested in the questionnaire. The government did not provide any of these notices as it claimed that 'they do not exist anymore'*".

1123 Council Implementing Regulation (EU) No 1239/2013 of 2 December 2013 imposing a definitive countervailing duty on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the PRC, recital 364.

transfer. While one notice specifically limits the potential buyers of the [LUR] *to the photovoltaic industry, another sets limits to the price initially set by the authorities and does not allow the market to determine the price. The auctions themselves were not seen to provide a real competition because in many of the examples viewed during the on spot verifications of exporting producers only one company made a bid (only the sampled PV producer) and therefore their opening bid (the value set by the local Land Bureau) formed the final price per square metre.*

The TDI investigation on certain filament glass fibre products found that: "[…] *for each and every land use right purchase by the sampled exporting producers, the Commission found no evidence of an auction process that independently set the price of the land use right. The exporting producer* […] *was the only bidder,* [and] *was awarded the land use right*"[1124].

Lack of bidding process and arbitrary initial price setting was also found in a TDI investigation on certain steel products in 2013, confirmed in an expiry review in 2019[1125].

In another case, the Commission found similar types of distortions, with the findings of distortions being further supported by the statements of the involved companies[1126]:

> […] *for each and every land use right purchase by the sampled exporting producers, the Commission found no evidence of an auction process that independently set the price of the land use right. The company awarded the land either bid the starting price, or 5 CNY per square metre more than the starting price, and, as it was the only bidder, it was awarded the land use right.*
>
> […] *The government then stated that the floor prices are there to ensure that the final price does not fall below 'the basic market value' for the land use right. No evidence was provided to support this statement, which is in itself circular, as the amount of money paid for the land use right (which the government has fixed) is supposed to be the market price (on which the floor is then based).* […]
>
> *The government, despite requests, has not provided evidence of one single land use right being priced by competitive auction, and therefore the effect of the process is*

1124 Commission Implementing Regulation (EU) No 1379/2014 of 16 December 2014 imposing a definitive countervailing duty on imports of certain filament glass fibre products originating in the PRC and amending Council Implementing Regulation (EU) No 248/2011 imposing a definitive anti-dumping duty on imports of certain continuous filament glass fibre products originating in the PRC, *OJ L 367, 23.12.2014, p. 22–81,* recital 192.

1125 Council Implementing Regulation (EU) No 215/2013 of 11 March 2013 imposing a countervailing duty on imports of certain organic coated steel products originating in the PRC, *OJ L 73, 15.3.2013, p. 16–97,* recitals 112-117, and Commission Implementing Regulation (EU) 2019/688 of 2 May 2019 imposing a definitive countervailing duty on imports of certain organic coated steel products originating in the PRC following an expiry review pursuant to Article 18 of the Regulation (EU) 2016/1037 of the European Parliament and of the Council, *OJ L 116, 3.5.2019, p. 39–74,* recitals 80-90.

1126 Commission Implementing Regulation (EU) No 471/2014 of 13 May 2014 imposing definitive countervailing duties on imports of solar glass originating in the PRC, *OJ L 142, 14.5.2014, p. 23–67,* recitals 176-181. The findings were confirmed in an expiry review investigation in 2020. See Commission Implementing Regulation (EU) 2020/1081 of 22 July 2020 imposing definitive countervailing duties on imports of solar glass originating in the PRC following an expiry review pursuant to Article 18 of the Regulation (EU) 2016/1037 of the European Parliament and of the Council, *OJ L 238, 23.7.2020, p. 43–81,* recitals 108-118.

that the government sets the price and the company pays this price. While multiple bidders may not be an absolute requirement in every instance in order to establish the existence of a market-based system, the complete lack of multiple bidders, which was found to be the case with regard to all sampled companies, is a strong indication of the absence of true market prices. [...]

[...] *In the case where one sampled company paid 5 CNY per square metre more than the price set by the government, the company stated to the Commission that they were told to do so by the competent authority simply to make it look as if an auction had taken place.*

Similar findings were made in the investigation concerning certain woven and/or stitched glass fibre fabrics, where the following was established: "*For the plots of land that were provided through bidding, the Commission found that in each case, there was only one bidder for the land, and the price paid corresponded to the starting price of the bidding process. In the absence of additional detailed information concerning the actual process of the auction, it was uncertain that the initial price as set independently and corresponded to the market value of the land-use right*"[1127].

Another type of distortion concerns land-use right valuation. A previous TDI investigation found that the price paid for the land-use right was below market value: [1128]

[...] *a property valuation report established by an independent auditor.* [...] *shows that there is marked difference between the price paid by the exporting producer for its land use right and the market value.*

Concerning the valuation of the land-use rights, the Commission disclosed to the interested party the detailed methodology used to estimate the difference between the fair market value and the actual costs. [...] *The difference of + 35 % was found significant and can be only explained by a transfer price well under a fair market value at the time of the transaction between the company and the local authorities.*

Most of the above irregularities continue to be commonplace, as confirmed in the 2021 investigation of the aluminium converter foil[1129], which established the following:

[...] *the authorities set the prices according to the urban land evaluation system, which instructs them among other criteria to consider also industrial policy when setting the price of industrial land.*

1127 Commission Implementing Regulation (EU) 2020/776 of 12 June 2020 imposing definitive countervailing duties on imports of certain woven and/or stitched glass fibre fabrics originating in the PRC and Egypt and amending Commission Implementing Regulation (EU) 2020/492 imposing definitive anti-dumping duties on imports of certain woven and/or stitched glass fibre fabrics originating in the PRC and Egypt, *OJ L 189, 15.6.2020, p. 1–170,* recital 496.

1128 Commission Implementing Regulation (EU) 2016/1247 of 28 July 2016 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aspartame originating in the PRC, *OJ L 204, 29.7.2016, p. 92–111,* recitals 24 and 56.

1129 Commission Implementing Regulation (EU) 2021/2287 of 17 December 2021 imposing definitive countervailing duties on imports of aluminium converter foil originating in the PRC and amending Implementing Regulation (EU) 2021/2170 imposing definitive anti-dumping duties on imports of aluminium converter foil originating in the PRC, *OJ L 458, 22.12.2021, p. 344–458,* recitals 540-545.

The current investigation did not show any noticeable changes in this respect. For instance, the Commission found that most of the sampled companies obtained their [LUR] *through allocation by local authorities and not through a bidding procedure.*

For the plots of land that were provided through bidding, the Commission found that in each case, there was only one bidder for the land, and the price paid corresponded to the starting price of the bidding process. In the absence of additional detailed information concerning the actual process of the auction, it was uncertain that the initial price was set independently and corresponded to the market value of the [LUR].

Moreover, the Commission also found that some companies received refunds from local authorities to compensate for the prices which they paid for the [LUR]. *Furthermore, some of the* [LUR] *obtained only had to be paid several years after the land had been put into use.*

[„„] *the findings of this investigation show that acquisition of* [LUR] *in the PRC was non-transparent and the prices were arbitrarily set by the authorities.*

These findings were confirmed also in the investigation concerning the optical fibre cables sector which was concluded in 2022 and in which the Commission found that "*most of the sampled companies obtained their* [LUR] *through allocation by local authorities and not through a bidding procedure*"[1130].

In certain instances, however, the Commission did find that the LUR were traded at a market value price[1131]. Nevertheless, a significant number of the Commission's TDI investigations established notable distortions with regard to the LUR, as elaborated above. Other authorities investigating the situation in China also found distortions with regard to preferential supply of land[1132]. Therefore, it seems that the application of the law varies from case to case, with a majority of investigated cases, however, finding considerable distortions.

9.8. CHAPTER SUMMARY

The system of land property and LUR is still under development. Even though a comprehensive set of legislation governs the acquisition, transfer and pricing of LUR for commercial purposes, which in principle should ensure impartiality and equal opportunities for different economic players, those rules are often not implemented in practice, as systematically established in the Commission's TDI investigations: a number of buyers (in particular SOEs) received their land for free or participated in tenders with only one participant, obtaining the land use rights at a

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1130 See Commission Implementing Regulation (EU) 2022/72 of 18 January 2022 imposing definitive countervailing duties on imports of optical fibre cables originating in the PRC and amending Implementing Regulation (EU) 2021/2011 imposing a definitive anti-dumping duty on imports of optical fibre cables originating in the PRC, *OJ L 12, 19.1.2022, p. 34–147, recital 539.*

1131 See Commission Implementing Decision (EU) 2016/176 of 9 February 2016 terminating the anti-dumping proceeding concerning imports of tartaric acid originating in the PRC and produced by Hangzhou Bioking Biochemical Engineering Co. Ltd, *OJ L 33, 10.2.2016, p. 14–37,* recital 60.

1132 See Canada Border Services Agency, Statement of Reasons Concerning the making of final determinations with respect to the dumping and subsidizing of certain stainless-steel sinks originating in or exported from the PRC. Decision in case number AD/1392 and CV/129, available at: http://www.cbsa-asfc.gc.ca/sima-lmsi/i-e/ad1392/ad1392-i11-fd-eng.html (accessed on 8 December 2022).

very low price. There are also significant discrepancies between different regions and individual cases. A number of distortions were established at the level of implementation: the rules on land provision and acquisition in China are often unclear and non-transparent, and the prices are often set by the authorities on the basis of non-market considerations, such as industrial policies.

However, the issues with land allocation in China go much beyond the insufficient enforcement of existing laws. An underlying reason is the fact that all land is owned by the State (collectively owned rural land and state-owned urban land), making the allocation of land dependent solely on the State, which may pursue specific political goals and put in place and maintain corresponding procedures to ensure that land is allocated in line with such political priorities rather than in line with free market principles.

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10.1. ENERGY MARKET OVERVIEW

In line with China's economic growth trends, the growth in electricity consumption in China in recent years has been very rapid, with demand in 2021 around 10% higher than in 2019[1133].

China is currently the world's largest electricity producer with a total installed generation capacity (data for 2021) of some 2 376 gigawatt ('*GW*'), of which thermal power capacity accounts for 1 297 GW (55%), hydro for 391 GW (16%), nuclear for 53 GW (2%), wind for 328 GW (14%) and solar for 307 GW (13%). Total electricity generation in 2021 was 8 376

[1133] IEA (2021). World Energy Outlook 2021, p. 88, available at: https://www.iea.org/reports/world-energy-outlook-2021 (accessed on 2 June 2023).

terawatt-hour ('*TWh*'), of which 5 646 TWh by thermal power plants (67%), 1 340 TWh by hydro (16%), 407 TWh by nuclear (5%), 655 TWh by wind (8%) and 327 TWh by solar (4%)[1134].

10.1.1. CURRENT STATE OF THE POWER SECTOR

In 2002, China began a series of reforms to the electric power sector with the release of the 'Electric power sector reform plan' (commonly known as '*Document no. 5 on electric power sector reform*')[1135]. The plan intended to introduce more competition in both power generation and electricity distribution. According to Article 5 of the document, the goal was "*to break monopoly, introduce competition, improve efficiency, reduce costs, improve the electricity price mechanism, optimize resource allocation, promote the development of electricity, promote nationwide networking, and build an electricity market system with separation of government and enterprises, fair competition, openness and healthy development under government supervision.*" While progress was made in various target areas, the reform largely failed to generate significant competition in the country's energy markets. On the contrary, it also led to the creation of a power generation system dominated by SOEs, including the country's two primary transmission grid operators (State Grid and China Southern Power Grid) and five major power generation corporations: China Datang Corporation, Huadian, China Huaneng Corporation, China Energy Investment Corporation (*'CEIC'*)[1136] and State Power Investment Corporation (*'SPIC'*)[1137].

In March 2015, the CCP Central Committee and State Council published *Several opinions on further deepening electric power system reform*[1138], followed by the publication of six other supporting documents in November 2015 by NDRC and the NEA, which included initiatives such as the following:

- orderly opening up of electricity generation and consumption plans[1139];

1134 China Energy Portal, available at: https://chinaenergyportal.org/en/2021-electricity-other-energy-statistics-preliminary/ (accessed on 2 June 2023).

1135 State Council: Electric power sector reform plan, available at: http://www.gov.cn/zhengce/content/2017-09/13/content_5223177.htm (accessed on 11 August 2023).

1136 PRC's biggest coal producer Shenhua Group Corp was merged with one of the top five state power companies, China Guodian Corp, creating CEIC, the world's largest power company by installed capacity and with assets worth USD 271 billion (RMB 1.8 trillion). See: Paraskova, T. Business Insider: *Chinese merger creates the world's biggest power group with $271 billion in assets*, available at: https://www.businessinsider.com/china-largest-power-company-shenhua-group-merger-2017-8?r=US&IR=T (accessed on 11 August 2023).

1137 Huaneng Group, Huadian Group, CEIC, SPIC and Datang Group accounted for 44% of China's total installed generating capacity by the end of 2020. See China's Big 5 power producers face uphill battle in meeting peak emissions targets, available at: https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/coal/060721-chinas-big-5-power-producers-face-uphill-battle-in-meeting-peak-emissions-targets (accessed on 11 August 2023).

1138 Opinions Regarding the Deepening of the Electric Power System's Reform issued in March 2015 by the CCP Central Committee and the State Council, available at: https://www.ndrc.gov.cn/fggz/tzgg/ggkx/201504/t20150409_1077736.html and at: https://news.bjx.com.cn/html/20150410/606700-1.shtml (accessed on 16 August 2023).

1139 NDRC: Implementation opinions on orderly opening up of electricity generation and consumption plans, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/W020190905506464677986.pdf (accessed on 2 June 2023).

- pushing forward the development of electricity markets[1140];
- setting up electricity trading institutions and regulating their operations[1141];
- reforming power transmission and distribution pricing[1142];
- pushing forward electricity retail side reform[1143];
- enhancing regulations on coal-fired captive power plants[1144].

Those documents were part of the '*controlling the middle and opening up two ends*' strategy, meaning opening up power generation and sale, while maintaining state control of power transmission and distribution[1145]. This strategy sought to deepen the reform of the power sector in several keyways:

- relaxing government planning[1146]:
  - gradually reducing the proportion of electricity subject to generation and consumption plans;
  - retaining planning for electricity related to public welfare, including power for households, agriculture and key public services, and ensuring stability of their power supply;
  - retaining planning and quota allocation for renewable energy (including wind, solar and biomass) to ensure its purchase by grids;
- pushing forward market-based electricity trading[1147]:
  - allowing qualified power generation companies, electricity retail firms and selected end users to participate in market-based trading, with electricity prices and generation volumes determined by negotiation among market participants;
  - promotion of market-oriented reforms while simultaneously strengthening government supervision;
  - introduction of safeguard and restrictive measures to prevent market failures;
- strengthening cost and pricing supervision for grids[1148]:
  - transforming the function of grid operators to act solely as power transmission service providers and charge service fees verified by the Government based on '*approved cost-*

1140 NDRC: Implementation opinions on pushing forward development of electricity markets, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/W020190905506464110649.pdf (accessed on 2 June 2023).

1141 NDRC: Implementation opinions on setting up electricity trading institutions and regulating their operations, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/W020190905506464409167.pdf (accessed on 2 June 2023).

1142 NDRC: Implementation opinions on reforming power transmission and distribution pricing, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/W020190905506463783577.pdf (accessed on 2 June 2023).

1143 NDRC: Implementation opinions on pushing forward electricity retail side reform, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/W020190905506465014964.pdf (accessed on 2 June 2023).

1144 NDRC: Guiding opinions on strengthening the supervision and regulation on coal-fired captive power plants, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/W020190905506465303962.pdf (accessed on 2 June 2023).

1145 Fitch Ratings: *China's New Power Tariff Mechanism Enhances Cost Pass-Through*, available at: https://www.fitchratings.com/research/corporate-finance/china-new-power-tariff-mechanism-enhances-cost-pass-through-14-10-2021 (accessed on 2 June 2023).

1146 NEA: Main content of planned electricity liberalisation, available at: http://www.nea.gov.cn/2015-12/11/c_134907464.htm (accessed on 2 June 2023).

1147 NDRC: Interpretations of electric power sector reform supporting documents, available at: http://www.gov.cn/zhengce/2015-12/11/content_5022775.htm (accessed on 16 August 2023).

1148 *Ibid.*

plus reasonable profits', instead of using their monopoly to influence power generation and retail prices for profit.

Despite the ongoing market orientation reform described above, China's power sector still retains many features of state control and a planned economy.

To start with, the prices relevant for the energy system are still not market based, with the State setting on-grid power tariffs and controlling retail electricity prices. The government recognised that the prices are largely controlled by the state: "[...] *It should be said that the coal power price formation mechanism of "basic price + fluctuation" has a positive effect on fostering the introduction of a competition mechanism in China's power generation sector as well as on other aspects. But one must also see that the market-oriented reform of China's power industry has not been completed yet, and it cannot be achieved overnight*"[1149].

Furthermore, the electricity market in China is characterised by strong involvement of SOEs in various stages of the supply chain as described above. It is worth noting that the strong state presence does not only concern the electricity market but extends to the entire energy sector. The energy market is greatly controlled by both centrally and provincially owned energy SOEs, hence both the national and provincial governments influence the energy market. Out of 96 centrally owned SOEs currently being overseen by SASAC, 18 are in the energy sector (down from 21 in 2017, when the previous version of this report was published): China National Nuclear Corporation, China National Petroleum Corporation, China Petrochemical Corporation, China National Offshore Oil Corporation, China Oil & Gas Pipeline Network Corporation, State Grid Corporation of China, China Southern Power Grid, China Huaneng Group Co., Ltd., China Datang Corporation Ltd., China Huadian Corporation Ltd, State Power Investment Corporation Limited, China Three Gorges Corporation, China Energy Investment Corporation, China Energy Conservation and Environmental Protection Group, China National Coal Group Corporation, China Coal Technology & Engineering Group, China Energy Engineering Group Co. Ltd. and China General Nuclear Power Corporation.[1150] With the government's push for the creation of large 'champion' state-owned companies, the trend to further diminish the number of energy enterprises through mergers and reorganisations is likely to continue in the future, while maintaining – or even facilitating – the governmental influence on the energy market[1151].

State influence goes far beyond controlling prices and dominating the corporate structure of the power sector. Indeed, the State (both on central and provincial level) is responsible for the approval of power generation projects, and controls the total amount of electricity generation, based on yearly plans and quotas[1152].

1149 See at: http://www.nea.gov.cn/2021-10/15/c_1310247093.htm (accessed on 2 June 2023).

1150 List retrieved from the SASAC directory on 21 October 2022, available at: http://en.sasac.gov.cn/n_688.htm (accessed on 16 August 2023).

1151 See for example consolidation in the oil sector: https://www.caixinglobal.com/2020-06-04/china-takes-first-step-in-consolidating-energy-infrastructure-101563248.html (accessed on 16 August 2023).

1152 Examples of such detailed annual electricity production targets include the Inner Mongolia's Notice on Adjusting the Expected Regulation Target of Power Generation in Western Inner Mongolia in 2020,

10.1.2. Regulatory Agencies

Energy-related issues are mostly managed by the NEA, which was established in 2008, within NDRC. The functions of NEA include formulating and implementing energy development plans and industrial policies, promoting institutional reform in the energy sector, and administering energy sectors including coal, oil, natural gas, power (including nuclear power), and new and renewable energy[1153].

Another body important for the management of energy issues is the National Energy Commission, which is an overarching authority in charge of energy strategy (and chaired by the Premier)[1154]. Furthermore, a number of other authorities have certain competencies with regard to the energy sector, including SASAC (see Section 2.2.3.3), the Ministry of Environmental Protection ('*MEP*'), MOFCOM and the Ministry of Natural Resources.

10.2. Pricing

China's electricity supply is split into three systems, each having their own pricing mechanism:

- planned electricity sold at government-designated prices (see Section 10.2.1);
- market-based electricity with prices negotiated between selected power producers and industrial consumers (see Section 10.2.2);
- captive power, where users generate their own electricity (see Section 10.2.3).

10.2.1. Central Price-Setting

Given that in certain industries electricity is a very important or even the main production cost input, electricity pricing represents an essential question of industrial policy. As an example, the share of electricity costs in China in the final production cost is at the level of 33% for aluminium smelters[1155] and around 30-40% for silicon metals[1156]. China's electricity prices are not homogenous and there are considerable price differences among provinces. In 2022, the average electricity price was the highest in Shanghai, reaching RMB 0.8012 per a kilowatt-hour (kWh), and the lowest electricity prices were in Qinghai, at RMB 0.1954 per kWh[1157]. With such differences, the cost of energy is often decisive when selecting a location for new industrial

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available at: http://gxt.nmg.gov.cn/zwgk/fdzdgknr/tzgg/202105/t20210511_1454023.html (accessed on 16 August 2023); The Shanxi Province 2020 Adjustment Plan for the Power Generation Regulation Targets Applicable to Power Generation Enterprises (Draft for Comments), available at: https://solar.in-en.com/html/solar-2351641.shtml (accessed on 8 September 2023); The Zhejiang Province 2020 Electric Power Balance Plan, available at: http://www.czguangfu.org/PolicyLaws/5584.html (accessed 8 September 2023); The Anhui Province Three-Year Action Plan for Electricity Supply Guarantee (2022-2024), available at: http://www.chic.org.cn/Home/index/detail?id=1123 (accessed on 16 August 2023).

1153 List of NEA's responsibilities as listed on NEA's website http://www.nea.gov.cn/gjnyj/index.htm (accessed on 16 August 2023).

1154 *Ibid.*

1155 See https://www.spglobal.com/commodityinsights/en/market-insights/blogs/metals/031723-southeast-asia-may-hold-the-key-to-chinese-aluminum-smelters-production-woes (accessed on 21 August 2023).

1156 See https://news.metal.com/newscontent/102121461/silicon-costs-vary-a-lot-due-to-different-electricity-prices-silicon-prices-move-at-lows-and-close-to-break-even-point (accessed on 21 August 2023).

1157 Weixin: *Summary of industrial and commercial electricity prices in various provinces across the country in May 2022* (with electricity price list), available at: https://mp.weixin.qq.com/s?__biz=MzUxMzI4NDg3Ng==&mid=2247501704&idx=2&sn=c77ecef873cdbff8f79386ad8abd07d6&chksm=f95509ebce2280fd99bf526ab29cf971e0977e0b4992ceb1519ea57511124eee588fdc58304c&scene=27 (accessed on 16 August 2023).

projects in China and the provinces are often competing for new projects by offering various types of incentives, as will be evidenced below.

China is currently using a dual-track electricity price system, meaning that the state-set and market-based prices coexist at the same time. In principle, it means that the electricity produced within the government set targets is sold at prices fixed by the government, however any extra production can be sold at market-based prices, after fulfilling certain criteria. In 2021, 44.6% of total electricity consumption was market-based[1158].

Under the planned part of the electricity system, power generation market and the retail market are based on government-set benchmark prices and the fixed catalogue prices. The grid companies purchase power from power-generation companies at regulated fixed prices and resell power to customers at regulated fixed prices.

Within the Government, the State Council Department of Price, which is an NDRC department, is responsible for overseeing prices in China, including price setting for items included in the Catalogue of Pricing. The items included in the Catalogue, are '*subject to government-fixed price and government-guided price*'. The Catalogue of Pricing includes prices of electricity transmission and distribution as well as the prices for gas transport and oil[1159]. In addition, according to point 3 of the Catalogue of Pricing:

> *The price of electricity determined through market-based trading is formed by the market. The electricity price mechanism for coal-fired power generation and the on-grid electricity price for nuclear power that are not yet formed through market-based trading shall be temporarily set by the State Council's department in charge of prices and, prices shall be formed by the market when time comes, depending on the market-oriented reform process of the electricity sector. The electricity price that has not yet been formed through market transactions is temporarily managed in accordance with the current measures, and it shall be formed by the market in a timely manner depending on the process of power market reform. The pricing principle and overall level of the electricity sales price of priority electricity for residents, agriculture, etc. shall be established by the competent price department of the State Council, and specific price levels shall be formulated by the competent price department at the provincial level.*

The ongoing electricity sector reform, in line with the '*controlling the middle and opening up two ends*' strategy (see Section 10.1.1), fixed electricity transmission and distribution prices at an NDRC-approved rate in all 32 provinces as from 2016. NDRC issued the Pricing Measures for Provincial Power Grid Transmission and Distribution Prices (For Trial Implementation) in 2016 to formalise the mechanism and issued the formal measures in 2020[1160]. NDRC remains

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1158 See http://www.gov.cn/zhengce/2022-03/15/content_5679030.htm (accessed on 16 August 2023).

1159 See https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/202003/t20200316_1223371.html?code=&state=123 (accessed on 16 August 2023).

1160 NDRC: Pricing Measures for Provincial Power Grid Transmission and Distribution Prices, January 2020, available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202002/t20200205_1219961.html (accessed on 16 August 2023).

responsible for approving electricity transmission and distribution prices based on the principle of *'permitted revenue = permitted cost + permitted profit + tax'*[1161].

The electricity price reform is also listed as one of the targets in the NDRC's Notice of the Action Plan for the Reform of the Price Mechanism, which stipulates in point 7 the following[1162]:

> *Continue to deepen the electricity price reform. Further improve the price formation mechanism of provincial power grids, regional power grids, special projects across provinces and regions, and incremental distribution networks, and accelerate the rationalization of the transmission and distribution price structure. Continue to deepen the market-oriented reform of on-grid electricity prices for coal-fired power generation, gas-fired power generation, hydropower, nuclear power, etc., improve the price formation mechanism for wind power, photovoltaic power generation, and pumped storage, and establish a new energy storage price mechanism. Steadily promote the reform of sales electricity prices, orderly promote commercial electricity users to enter the electricity market and improve the tiered electricity price system for residents.*

Currently, most on-grid tariffs are set by the government[1163]. Different benchmark prices are adopted for power generated from different sources, with the final prices being subject to further adjustments, such as the price differentiation described in Section 10.2.1.2 below). Benchmark on-grid tariffs for hydropower and coal power are lower than nuclear, wind and solar power[1164].

- Coal-fired power: In 2004, the NDRC introduced a coal-power price linkage scheme, aiming to reflect coal price fluctuations in on-grid tariffs. This scheme was revised in 2012 in the 'Guiding opinions on deepening thermal coal market reform'[1165] and then in 2015 in NDRC's 'Notice on further improving coal-power price linkage mechanism'[1166]. The system was changed as from 2020 into the 'base price + float', based on the '*Guiding Opinions on Deepening the Reform of the On-grid Tariff Formation Mechanism for Coal -Fired Power*'[1167] issued by the NDRC. According to this document, the base price is set at the same level as the benchmark tariff it replaced, and it can deviate upwards or

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1161 Other documents in the electricity transmission and distribution pricing reform include: NDRC Interim measures for regional power transmission pricing; NDRC Interim measures for setting prices for transmitting electricity for cross-province and cross-region projects; NDRC Guiding opinions on local and incremental power distribution pricing (all three documents issued on 29 December 2017) and NDRC Notice on approving 2018-19 regional power transmission pricing (issued in February 2018).

1162 NDRC Action Plan for the Reform of the Price Mechanism, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202105/t20210525_1280785.html?code=&state=123 (accessed on 16 August 2023).

1163 Whereas the prices of oil, coal and pipeline-imported natural gas have been to some extent liberalised and are no more centrally regulated.

1164 Energy Observer (16 August 2016). *Six facts about China's electricity prices* (original text in Chinese), available at: https://mp.weixin.qq.com/s/m2_FFT3PYSWS5CiEXbDPGA (accessed on 17 August 2023).

1165 State Council: Guiding opinions on deepening thermal coal market reform, available at: http://www.gov.cn/zwgk/2012-12/25/content_2298187.htm (accessed on 17 August 2023).

1166 NDRC: Notice on further improving coal-power price linkage mechanism, available at: http://fgcx.bjcourt.gov.cn:4601/law?fn=chl526s560.txt (accessed on 17 August 2023).

1167 Full text available at: https://zfxxgk.ndrc.gov.cn/web/iteminfo.jsp?id=16530 (accessed on 17 August 2023).

downwards, with final prices set through negotiations between power generators and electricity users bilaterally or via centralised bidding. The document clarifies that the NDRC is responsible for regularly setting both the benchmark price and the allowed float range (Article 3.1 of the document). In 2020, the floating range was set at 10% upwards and 15% downwards[1168]. In the aftermath of the COVID-19 pandemic, the prices were allowed to fluctuate even further (see Section 10.2.1.1).

- Hydropower: in 2014 the NDRC set up a new hydropower pricing mechanism in the *Notice on Improving On-grid Tariffs for Hydropower*. The document lays out a system for setting inter-provincial hydropower prices. Cross-provincial hydropower on-grid tariffs are calculated by subtracting cross-province electricity transmission costs from the receiving province's on-grid tariffs. The on-grid tariffs are negotiated between the hydropower supplying province and receiving province, taking into account the average on-grid tariff of the receiving province (regardless of the power source) minus the transmission price[1169]. Cross-provincial transmission costs are reviewed and approved by the central government. Intra-provincial hydropower on-grid prices, on the other hand, consider factors including average on-grid tariffs within the province (regardless of power source), overall power supply and demand, and project development costs. For instance, in Henan, the on-grid electricity price of newly built hydropower units connected to the grid is tied to the benchmark on-grid electricity price standard of RMB 0.32 per kWh[1170].
- Nuclear power: In 2013, the NDRC set the national benchmark on-grid price for nuclear power projects constructed after 1 January 2013 at RMB 0.43 per kWh, ending the 21-year practice of approving individual prices for each plant. On-grid tariffs remain unchanged for electricity generated from old plants. The new tariff is based on the average cost of generating nuclear power and power supply-demand conditions. Local on-grid tariffs are allowed to fluctuate by taking into account on-grid tariffs for local coal-fired plants[1171]. A new trial for on-grid tariff for the 3rd generation nuclear power projects approved in 2019 set the benchmark prices for the Taishan project in Guangdong province at RMB 0.435 per kWh, the Sanmen project in Zhejiang province at RMB 0.4203 per kWh and Haiyang project in Shandong province at RMB 0.4151 per kWh, based on the NDRC's *Notice on Issues Concerning Improving the On-grid Electricity Price Mechanism for Nuclear Power*.
- Wind power: the NDRC set up four tiers of on-grid tariffs for wind power in 2009. The policy classifies wind power prices into four categories based on project construction

1168 Hao, F., *New pricing could spell trouble for China's coal sector*, China Dialogue, available at: https://chinadialogue.net/en/energy/11759-new-pricing-could-spell-trouble-for-china-s-coal-sector/ (accessed on 17 August 2023).

1169 See NDRC: The state further improves the hydropower price formation mechanism, available at http://www.gov.cn/govweb/gzdt/2014-01/22/content_2573273.htm (accessed on 17 August 2023).

1170 See Henan DRC, Notice on improving the provincial hydropower on-grid tariff policy, available at: https://fgw.henan.gov.cn/2020/12-10/1966170.html (accessed on 17 August 2023).

1171 NDRC on improving Notice on Issues Concerning Nuclear Power On-grid Tariff Mechanism, available at: http://www.gov.cn/zwgk/2013-07/08/content_2442397.htm (accessed on 17 August 2023).

conditions and availability of wind resources[1172], with regions rich in wind resources receiving low on-grid tariffs. In 2019, the NDRC's *Notice on Improving the Policies on On-grid Tariffs for Wind Power* changed the benchmark price into a guidance price and set the values, depending on the four areas, to the following for 2020: RMB 0.29, RMB 0.34, RMB 0.38, RMB 0.47 per kWh respectively[1173]. The notice stipulates in Article 1(1) and Article 2(1) that newly approved centralized onshore wind power projects and newly approved offshore wind power projects should determine on-grid tariffs through competition, and the tariffs cannot be higher than the guidance in the resource area where the project is located.

- Solar power: Similar to wind power, there are three tiers of on-grid tariffs for solar power[1174]. Tariffs were based on construction costs and local solar resources availability, with regions rich in solar power receiving lower tariffs. In 2018, the price per kWh was set at RMB 0.55 in Region I, RMB 0.65 in Region II and RMB 0.75 in Region III[1175].

- Natural gas: Despite an increase in natural gas consumption because of the Government's push to move from coal to cleaner energy sources, natural gas accounted for only around 3.2% of total energy generation in China in 2020[1176]. Constrained by tight gas supply, the Government has been prioritising natural gas for residential heating rather than electricity generation. The Government has yet to develop a unified benchmark on-grid tariff scheme for electricity generated from natural gas; as of writing of this Report the price is determined by provincial governments, based on the NDRC's *Notice on Regulating the Management of On-grid Electricity Price for Natural Gas Power*[1177]. The document introduced an electricity linkage mechanism according to which the maximum gas-generated electricity price cannot exceed the local benchmark electricity price for coal-

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1172 Region I includes: Inner Mongolia (excl: Chifeng, Tongliao, Hulunbuir and Hinggan league), Xinjiang (incl: Urumchi, Ili Kazakh Autonomous Prefecture, Changji Hui Autonomous Prefecture, Karamay, Shihezi); Region II includes: Hebei (incl: Zhangjiakou, Chengde), Inner Mongolia (incl: Chifeng, Tongliao, Hulunbuir and Hinggan league), Gansu (incl: Zhangye, Jiayuguan, Jiuquan); region III includes: Jilin (incl: Baicheng, Songyuan, Suihua, Yichun, Daxing'anling), Gansu (excl: Zhangye, Jiayuguan, Jiuquan) Xinjiang (Urumchi, Ili Kazakh Autonomous Prefecture, Changji Hui Autonomous Prefecture, Karamay, Shihezi) Ningxia; regional IV includes all regions excluding type I, II and III.

1173 Full text available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201905/t20190524_962453.html?code=&state=123 (accessed on 17 August 2023).

1174 Region I: Ningxia, Qinghai (incl: Haixi), Gansu (incl: Jiayuguan, Wuwei, Zhangye, Jiuquan, Dunhuang, Jingchang) Xijiang (Incl: Hami, Tacheng, Altay, Karamay) Inner Mongolia (excl: Chifeng, Tongliao, Hinggan League, Hulunbuir); Region II: Beijing, Tianjin, Heilongjiang, Jilin, Liaoning, Sichuan, Yunnan, Inner Mongolia (Chifeng, Tongliao, Hinggan League, Hulunbuir) Hebei (Chengde, Zhangjiakou, Tangshan, Qinhuangdao) Shanxi (incl: Datong, Shuozhou, Xinzhou) Shaanxi (Incl: Yulin, Yan'an) Qinghai, Gansu, Xinjiang (excluding those areas in region I); Other regions. See at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/201712/W020190905495692766509.pdf (accessed on 17 August 2023).

1175 *Ibid.*

1176 The Oxford Institute for Energy Studies : *Natural gas in China's power sector*: *Challenges and the road ahead*, December 2020, available at: https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2020/12/Insight-80-Natural-gas-in-Chinas-power-sector.pdf (accessed on 17 August 2023).

1177 The Notice was issued in 2014 and took effect on 1 January 2015.

fired power generation or the average electricity purchase price of local power grid enterprises by RMB 0.35 per kWh.

10.2.1.1. POST COVID-19 CRISIS INTERVENTIONS INTO THE ENERGY MARKET

In the second half of 2021, China faced serious electricity supply problems due to heatwaves and drought, affecting highly populated areas and leading to power cuts and forcing production breaks in factories[1178]. In addition, a push to limit emissions and coal mining led to instable coal supply, driving coal prices up. The relatively low caps on electricity prices led to a situation where the electricity producers were forced to sell below cost and consequently cut their power output in order to minimise losses. Since the cuts happened during a period of rapidly growing demand after the Covid pandemics, China suffered from serious power cuts and supply shortages in many regions of the country. Some provinces introduced power rationing to meet the 'dual control' targets which limit total energy consumption and energy intensity (total energy consumption is capped without distinguishing between energy sources)[1179].

In result, NDRC issued a statement in which it allowed higher fluctuations of power prices as from October 2021. Power prices were allowed to fluctuate within 20% of the base price (fixed by the government), up from the previous limits of a 10% increase and 15% decrease during peak and off-peak demand hours, respectively. The statement also clarified that high energy-consuming industries are not subject to a price ceiling for electricity prices (i.e. the caps on fluctuations do not apply to them), while electricity prices for household, agricultural and public good use will be kept stable[1180]:

> *Orderly release the on-grid electricity price for all coal-fired power generation. In principle, all coal-fired power generation enters the electricity market, and the on-grid electricity price is formed through market transactions within the range of "base price + fluctuation". The current benchmark price of coal-fired power generation continues to be the benchmark for the formation of new energy power generation prices. (2) Expand the range of up and down the market transaction electricity price. The floating range of the coal-fired power generation market transaction price will be expanded from the current floating range of no more than 10% to no more than 15% in principle and expanded to a floating range of no more than 20% in principle, and the market transaction price of high energy-consuming*

1178 DW (29 September 2021). *China: Power cuts hit households, businesses.*; available at: https://www.dw.com/en/china-widespread-power-outages-hit-households-businesses/a-59355022 (accessed on 17 August 2023).

1179 Dual control means that there are targets set for both total energy consumption as well as energy intensity, which the provinces need to meet. According to NDRC's Plan for Improving the Dual Control System of Energy Consumption Intensity and Total Volume, the goal of those controls is the reduction in energy consumption and improvement in energy efficiency. For more details see NDRC website on dual control: https://www.ndrc.gov.cn/xxgk/jd/jd/202109/t20210922_1297199.html?code=&state=123 (accessed on 17 August 2023).

1180 NDRC Notice on Further Stepping up the Market-oriented Reform of On-grid Tariffs for Coal-fired Power Generation, October 2021; available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202110/t20211012_1299461_ext.html (accessed on 17 August 2023).

enterprises is not subject to a 20% increase limit. The spot price of electricity is not limited by the above range.

As of writing of this Report, it is not clear whether this measure is only temporary or whether it will remain valid also in the future. According to the current rules, it is valid until further notice.

The COVID-19 crisis has also pushed individual provinces to introduce measures lowering the cost of electricity for enterprises. As an example, Shenzhen introduced an electricity subsidisation programme detailed in the *Work plan for electricity subsidy for industrial and commercial users in Shenzhen from April to May 2022*. The Shenzhen province offered a 10% subsidy for electricity bills settled by power supply companies from April 1 to May 31, 2022, to electricity users who meet the requirements of the work plan[1181].

10.2.1.2. PRICE DIFFERENTIATION

The differentiation by customer category not only follows the line of residential vs. industrial customers[1182], but also extends to differentiation between customers using modern energy-saving technologies vs. customers using outdated energy-intense machinery. Three-tiered electricity pricing is applied by the government to phase out outdated production and promote industrial restructuring more rapidly[1183].

10.2.1.2.1. Increased Electricity Prices for Certain Industries

In addition to the (basic) price setting mechanisms described in Section 10.2.1, the electricity prices are further adjusted depending on the customer category. Companies belonging to certain sectors pay higher prices than those normally applicable. In this respect, the Government applies a three-tiered electricity pricing mechanism. This three-tiered pricing applies to a number of industries[1184] and represents a tool in pursuing the industrial policies reflected in the catalogue contained in Decision No. 40 (see Section 4.2.9. Users falling in the 'encouraged' sectors according to the NDRC catalogue pay the basic electricity rate, whereas users falling in the 'outdated' or 'prohibited' sectors pay a surcharge on top of the basic rate. Users not falling

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1181 See at: https://news.bjx.com.cn/html/20220706/1238849.shtml (accessed on 17 August 2023).

1182 The price differentiation between residential and industrial customers serves cross-subsidisation of resident users by industrial/commercial customers. Retail electricity prices are regularly adjusted at provincial level (see G20. (2016). *China's efforts to phase out and rationalise its inefficient fossil-fuel subsidies. A report on the G20 peer review of inefficient fossil-fuel subsidies that encourage wasteful consumption in China.*).

1183 Zhang, Z.X. (2014). *Energy prices, subsidies and resource tax reform in China*, Asia and the Pacific Policy Studies, 1(3): 439–454.

1184 For example, according to an NDRC rule introduced in December 2013, as from the beginning of 2014, power tariffs were to remain unchanged for aluminium smelters using less than 13 700 kWh per tonne of electrolytic aluminium. Smelters using between 13 700 kWh and 13 800 kWh paid an additional surcharge of RMB 0.02 per kWh and smelters using above 13 800 kWh per tonne paid a surcharge of RMB 0.08 per kWh. Moreover, smelters consuming more than 13,700 kWh per tonne or whose energy saving target assessment was not completed, were not allowed to purchase electricity directly from the power plants (see NDRC MIIT, Notice on the implementation of a multiple-tier-pricing of electricity used by electrolytic aluminium enterprises, NDRC 2013/2530, 13 December 2013, Article I.i). The NDRC Notice of Tiered Electricity Price Policy (NDRC 2021/1239) limited the threshold even further: the standard was set at 13 650 kWh per ton and enterprises consuming more will pay a surcharge of RMB 0.01 per kWh, while as from 2023, the grading standard is set at 13 450 kWh per tonne of molten aluminium and from 2025 it is further lowered to 13 300 kWh per tonne.

into any category listed in the catalogue fall in the default category of 'allowed' enterprises and also pay the basic rate without surcharges.

One such example are electricity prices in the Gansu province, which since 2021 are increased for the energy-intensive industries - such as iron and steel, ferroalloy, electrolytic aluminium, zinc smelting, calcium carbide, caustic soda, yellow phosphorus, and cement - which exceed the approved production capacity[1185]. The electricity price increase for these industries should amount to RMB 0.30 per kWh. The electricity price increase for the production of cement clinker production capacity is set at RMB 0.40 per kWh. Finally, the price increase for production by obsolete capacity in iron and steel[1186] is set at RMB 0.50 per kWh. According to Article 12 of the Measures, the purpose of electricity price differentiation is: "*to support the technological transformation, transformation and upgrading of the industry, and promote the adjustment of the economic structure*".

Another example of punitive electricity pricing is the 2022 *Notice on Adjusting and Implementing Differential Electricity Prices in Eight High Energy-consuming Industries such as Ferroalloys*[1187] issued by the Bayin municipality in the Gansu province, which explains in Article 3 the exact modalities of price increases in the following way: "*The production capacity of enterprises listed in the "allowed" category shall be subject to the normal electricity price for large industries; the production capacity of enterprises listed in the "restricted" category and "elimination" category shall be increased by RMB 0.10 and RMB 0.30 per kWh respectively on the basis of the normal electricity price of large industries (including the cement and steel industries). For the production capacity of obsolete enterprises, the price will be increased by RMB 0.40 and RMB 0.50 per kWh respectively).*"

Similarly, the *Guangdong Province 2022 Work Plan for Promoting the Withdrawal of Backward Production Capacity*[1188] aims to promote the withdrawal of backward production capacity[1189] by "*strictly implementing differentiated energy resource prices such as differential*

1185 Measures for the Implementation of Differential Electricity Price Management in High Energy-consuming Industries in Gansu Province. Full document, available at http://fgw.pingliang.gov.cn/ywgz/jgsf/art/2022/art_ccc69c43839f46c29b9ece2f4dfc580c.html (accessed on 15 June 2023).

1186 Capacity which should be eliminated according to the Guidinge Catalogue for Industrial Structure Adjustment in connection with the Notice of the Ministry of Industry and Information Technology of the NDRC on the Use of Price Means to Promote the Supply-side Structural Reform of the Iron and Steel Industry (see Article 11 of the Measures for the Implementation of Differential Electricity Price Management in High Energy-consuming Industries in Gansu Province).

1187 Full text available at: https://www.baiyin.gov.cn/ywdt/tzgg8181/art/2022/art_5d78b1d5768f4206b3bcfccfced13802.html (accessed on 17 August 2023).

1188 Full text available at: https://www.zhigoudian.com/news/3101.html (accessed on 17 August 2023).

1189 The Guandong Province Work Plan envisages differentiation in electricity rates in the following cases: "*For the production capacity in key industries whose energy consumption and power consumption do not meet the mandatory standards and those that belong to the phase-out category of the 'Industrial Structure Adjustment Guidance Catalogue (2019 Edition)' (Order No. 29 of the NDRC of the PRC in 2019), differentiated energy resource prices such as differential electricity prices, tiered electricity prices, and punitive electricity prices shall be strictly implemented in accordance with the 'Notice on the Implementation of Ladder Electricity Price Policy for Electrolytic Aluminum Enterprises' ([2013] No. 2530) and 'Notice on Matters Concerning the Use of Price Means to Promote Industrial Structure*

electricity prices, tiered electricity prices, and punitive electricity prices". The plan targets certain energy intensive or polluting industries such as steel, cement, electrolytic aluminium, and flat glass.

10.2.1.2.2. Preferential electricity prices

In parallel to the differentiation described above, it was established in a number of instances that selected industries receive at the provincial level special electricity tariffs which are lower than electricity tariffs paid by other industrial users. The previous edition of this report mentioned that in 2017 some provinces offered cheaper electricity rates to specific industries. This included special rates for energy intensive industries in Chongqing, Zhejiang, Fujian and Yunnan. This report includes more recent evidence of preferential pricing in a number of locations in China. For example, in 2018 Yunnan fixed a specific price for its aluminium industry in the *Notice on Printing and Distributing the Special Electricity Consumption Plan to Promote the Integrated Development of Hydropower and Aluminium Materials*[1190]. The document sets electricity prices for electrolytic aluminium producers as well as electricity prices for alumina producers. The document specifies in point 3.1 that: "*Yunnan Wenshan Aluminium Co., Ltd. is the only alumina production enterprise in our province*" and further sets electricity prices for the alumina producers in the province, thereby in fact granting individual price rates to a specific company. The plan stipulates in point 3.3.2 the following: "*appropriate subsidies will be given by the local government where the electrolytic aluminium production capacity is located to ensure that when the electrolytic aluminium price is lower than 13,500 yuan/ton, electricity consumption price is not higher than 0.30 yuan/kWh*" and then in point 3.4.: "*The electricity price for deep processing of aluminium materials in the aluminium industrial park is 0.20 yuan/kWh, which is subsidized by the local government where the deep processing enterprises of aluminium materials are located.*"

As from 2015, Xinjiang also introduced preferential electricity pricing for the benefit of several industries. The beneficiaries include the textile and garment manufacturing industry as well as some other labour-intensive industries, including electronic assembly, footwear, toys, and wigs. This is applicable in the whole province. Those price cuts result in an annual reduction of electricity power costs for enterprises in the above sectors of more than RMB 1.5 billion[1191]. The subsidies are still in force as of writing of this report.

In Shanxi, 14 strategic and emerging industries benefit from reduced electricity prices based on the '*Implementation Plan of the Electricity Price Mechanism for Strategic Emerging Industries*'. Owing to this initiative, between October 2020 and June 2021 a total of 609 SEI

Adjustment in the Cement Industry' ([2014]] No. 880), 'Notice on Issues Concerning the Implementation of Tiered Electricity Price Policy for Cement Enterprises' ([2016] No. 75)', 'Notice on Issues Concerning the Use of Price Means to Promote the Steel Industry and Supply-side Structural Reforms (Development and Reform Price [2016] No. 2803)', 'Energy Consumption Limits for Glass and Cast Stone Products' (GB 21340-2019) and other requirements."

1190 See at: https://www.ynepdt.com/static/tinymce/20201202_2244631125.pdf (accessed on 8 September 2023).

1191 Chinanews: *Since 2015, Xinjiang textile and labour -intensive industries have reduced electricity costs exceeding 1.5 billion yuan*, available at: http://www.xj.chinanews.com.cn/jingji/2020-11-20/detail-ihaeasqx2464132.shtml (accessed on 19 September 2022).

enterprises in the province with the cumulative transaction volume of electricity of 13.755 billion kWh, could reduce their electricity costs by about RMB 2.68 billion[1192]. With the final electricity price target of RMB 0.3 per kWh, the average reduction in electricity price for the participating enterprises was of RMB 0.195 per kWh in 2021[1193].

There are also several economic zones granting preferential prices and subsidies to companies located in the zone. For example, in Xinjiang, the subsidies are still provided to companies located in the Hefeng Industrial Park of the Tacheng District. According to point 3 of the document 'Preferential policies' published on 9 August 2021 by the Tacheng District Commerce Bureau[1194]: "*The National Energy Administration of the National Development and Reform Commission has identified Hefeng Industrial Park as the second batch of incremental power distribution business reform pilots, which can provide preferential electricity prices and electricity subsidies for enterprises located in Hefeng Park.*" "*Subsidies for electricity used for production: On the basis of the household comprehensive electricity price of 0.38 yuan/kWh determined by the autonomous region, for an actual electricity price for users at 0.35 yuan/kWh, the finance administration cover the electricity price difference of 0.03 yuan/kWh as a subsidy.*"

These elements show that the official prohibition of preferential electricity prices suffers many exceptions.

The attempts to stop preferential pricing included a 2011[1195] NDRC Notice *on correcting and regulating electricity pricing*[1196]:

> Any management policy related to unauthorized price adjustments, any preferential electricity price measures spontaneously taken without prior NRDC approval and exceeding the price management competence of local governments and their related departments, any experimentation of direct electricity supply to large users or any other price reduction for electricity used by enterprises that have been developed without authorization and without prior approval of NRDC, the State Electricity Regulatory Commission, the National Energy Administration, shall be stopped immediately.

A specific *NDRC's Notice prohibiting preferential electricity pricing* was issued with regard to aluminium in 2013[1197]:

1192 Taiyuan Evening News, available at: https://baijiahao.baidu.com/s?id=1707115530265744205&wfr=spider&for=pc (accessed on 17 August 2023).

1193 Shanxi Provincial People's Government Portal website: *Shanxi increases the support for fiscal and taxation of advanced manufacturing industries*, published on 30 December 2021, available at: https://news.sina.cn/gn/2021-12-30/detail-ikyakumx7220326.d.html (accessed on 8 September 2023).

1194 Preferential Policies published by Tacheng District Commerce Bureau, 9 August 2021, available at: http://www.xjtc.gov.cn/zfxxgk/xxgkzl/tcdqhsjg/tcdqhzgszzjg1/swj/gksx18/zcfg7/content_217 (accessed on 7 February 2023).

1195 Repealed in 2016.

1196 NDRC, Notice on correcting and regulating electricity pricing, NDRC 2011/1311, Article 1, available at: http://www.gov.cn/zwgk/2011-06/23/content_1891300.htm (accessed on 17 August 2023).

1197 NDRC MIIT, Notice on the implementation of a multiple-tier-pricing of electricity used by electrolytic aluminium enterprises, NDRC 2013/2530, 13 December 2013, Article 2.I., available at: http://www.gov.cn/zwgk/2013-12/26/content_2554621.htm (accessed on 17 August 2023).

Prohibition of spontaneous introduction of preferential price measures applicable to electricity. All provinces and places shall strictly implement the national electricity pricing policy, they may not spontaneously reduce the electricity price applicable to electrolytic aluminium enterprises. Preferential electricity prices applicable to electrolytic aluminium enterprises that are already in force shall be corrected immediately.

The *2021 NDRC's Notice on improving tier-electricity prices for electrolytic aluminium* sector yet again banned the practices of singling out the aluminium sector in electricity pricing[1198]:

> *No* preferential *electricity pricing policy shall be launched. Local governments shall strictly carry out national electricity policies. No local government may offer preferential electricity prices for the electrolytic aluminium industry or organize special trade in the electricity market for electrolytic aluminium enterprises. Those already in place shall be terminated immediately. It is strictly prohibited to include preferential electricity price policy as an index for the responsibility appraisal of the 'double control' of power consumption (energy consumption intensity and total energy consumption) by the people's governments at the provincial level.*

China also explicitly recognised in a Notice of the State Council, released in 2014, that the practice of offering preferential electricity rate to specific industries in individual provinces '*may breach China's international commitments*', including WTO rules[1199]. According to this Notice, some preferential policies should be cancelled or standardised to ensure compliance: "*Other preferential policies, either payments of the social security contributions or other operating costs on behalf of enterprises, electricity and water preferential prices, in the form of fiscal incentives or subsidies so as to attract enterprises from other regions or so as to keep or increase local fiscal revenues from enterprises in the areas where these policies are implemented shall gradually be standardised*"[1200]. In other words, China recognized that there were distortions that need addressing.

In short, despite the fact that in general the preferential pricing is not allowed as such in China, such practices still remain widespread, as explained above. This lack of enforcement of central rules may be due to a number of reasons, not least that because the goals at the central level, for example greening of the economy, might be in conflict with local targets, such as keeping the high level of employment by supporting the largest employers in the region. The position of the central government is however also not free of contradictions, as the policy document released by the Tacheng district mentioned above, indicates that there are pilot incremental power distribution business reforms, applicable to certain areas, such as the Hefeng Industrial

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1198 Announcement of the NDRC on Improving the Tiered Electricity Pricing Policy of Electrolytic Aluminium Industry, NDRC Pricing [2021] No. 1239, Article 2.I.; available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202108/t20210827_1294888.html?code=&state=123 (accessed on 17 August 2023).

1199 State Council, Notice on cleaning up and standardising tax and other preferential policies. State Council Legal Affairs Office 2014 No 62: *"[...] some tax and other preferential policies have disrupted the market order, impacted the effectiveness of the national economic macro-control and may breach China's international commitments giving rise to international trade disputes"*, available at: http://www.gov.cn/zhengce/content/2014-12/09/content_9295.htm (accessed on 17 August 2023).

1200 *Ibid.*, Article 3.

Park, which allows granting preferential electricity prices and electricity subsidies to enterprises located therein.

10.2.2. Market-Based Electricity Trading: Direct Power Purchase

10.2.2.1. Introduction

The so-called 'market-based' trading can be split into two categories[1201]:

- bilateral negotiated trading (direct electricity supply):
  - original form of market-based trading, which entails direct negotiation on price and volume between one power generation company and one user, often on an annual basis. The scheme was initiated in 2004 but saw little development until 2013, when the pilot approval procedure was simplified for traditional energy sources. Since September 2021, China started a new initiative to promote direct trading in renewable energies. As a first step, a pilot direct trading of green power between corporate consumers and renewable energy generators was launched with the aim to broaden its application to other areas in China[1202].
- centralised trading:
  - centralised bidding: the first centralised bidding scheme was launched in 2013, in Guangdong[1203]. Under this scheme, sellers and buyers can submit proposed volumes and prices on trading platforms, and platforms match sellers with buyers. In October 2021, the total transaction volume in Guangdong was 2.87 billion kWh[1204].
  - listed transactions: electricity sellers and buyers make offers via power trading platforms to sell or purchase electricity at certain prices and volumes. Sellers and buyers can see their counterparts' offers, and transactions are declared successful if both sellers and buyers agree on the offers.
  - rolling matching transactions: market players can participate within a specified start and end time of the transaction; the electricity trading platform then gives priority to different users depending on requested price and time.

The Government promotes direct power purchase by large end-users, with the goal of enhancing competition in the energy market by bringing additional buyers to the market other than the two power grid companies. The *Opinions Regarding the Deepening of the Power Sector's Reform*

1201 See Article 33 and 34 of the NDRC Interim rules on mid- to long-term marketised electricity trading (2020), available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202007/P020200701615033180814.pdf (accessed on 17 August 2023).

1202 See at: http://english.www.gov.cn/statecouncil/ministries/202109/08/content_WS6137ee2bc6d0df57f98dfd3d.html (accessed on 17 August 2023).

1203 Caixin: *Guangdong initiated centralised bidding for electricity trading*, available at: http://m.companies.caixin.com/m/2014-01-07/100626020.html (accessed on 17 August 2023).

1204 See at: https://stock.finance.sina.com.cn/stock/go.php/vReport_Show/kind/search/rptid/686311403987/index.phtml (accessed on 17 August 2023).

provide for an expansion of provincial-level pilot programs which allow large end users to bypass grid companies and negotiate prices directly with generators[1205].

Whereas the system of auctioning ensures a certain degree of fairness to the process, direct bilateral negotiations provide much less transparency. Therefore, the analysis below will concentrate on the direct power purchase. However, there are also distortions present in the centralised trading part of the market-based electricity trading listed above, allowing certain selected enterprises to benefit from the market-based trading policies.

For example, in a previous Commission countervailing investigation into optical fibre cables, it was found that companies within one of the sampled groups benefitted from specific refunds/adjustments of their electricity cost because these companies were allowed to participate in a pilot programme for 'market-oriented electricity transactions'. These companies did not have a contract with a power generator for direct electricity supply. The refunds/adjustments were received because the companies concerned communicated in advance their power demand to the power plants. The Commission found that this constituted a subsidy (financial contribution in the form of revenue foregone by the Chinese government, i.e. the operator of the grid) that conferred a benefit to the companies concerned. The benefit for the recipients was equal to the electricity cost saving through refunds/adjustments because of the participation in a pilot programme for 'market-oriented electricity transactions', since the electricity was provided at a price below the normal grid price paid by other large industrial users that were not allowed by the State to participate in 'market-oriented transactions' for the supply of electricity[1206].

10.2.2.2. DIRECT POWER PURCHASE: ELIGIBILITY CRITERIA

Originally, the criteria for participating in the direct electricity supply were based on the conditions set out in the Basic Rules for Medium- and Long-term Electricity Trading (provisional)[1207] issued by the NDRC and NEA in December 2016. The precise eligibility criteria could vary from one territorial authority to another. For example, in Beijing, eligible electricity users had to be included in the Guidance Catalogue for Industrial Structure Adjustment (see Section 4.2.9) and comply with the national and provincial (municipal) energy-saving and environmental protection standards[1208].

1205 According to Article 3(2)5 of the CCP Central Committee and the State Council, Opinions Regarding the Deepening of the Power Sector's Reform, the market entities (electricity generators, sellers and users) negotiate directly, and the users need to pay the corresponding grid fee to the power grid enterprise according to the transmission and distribution fee stipulated by the state. Full text available at: http://fjb.nea.gov.cn/pufa_view.aspx?id=31434 (accessed on 17 August 2023).

1206 See recitals 520 and 528 of the Commission Implementing Regulation (EU) 2022/72 of 18 January 2022 imposing definitive countervailing duties on imports of optical fibre cables originating in the PRC and amending Implementing Regulation (EU) 2021/2011 imposing a definitive anti-dumping duty on imports of optical fibre cables originating in the PRC.

1207 Available at: https://www.waizi.org.cn/law/16217.html (accessed on 17 August 2023).

1208 For detailed rules concerning Beijing, see: http://zfxxgk.nea.gov.cn/auto92/201607/t20160729_2280.htm (accessed on 14 November 2022).

The 2016 Basic Rules were replaced by the *Notice of Issuing the Basic Rules for Medium- and Long-Term Electricity Trading* enacted by the NDRC and NEA in 2020[1209], which modified the rules concerning direct electricity trading. Also, according to this document, the possibility to enter into direct contracts is limited to those industrial consumers which comply with certain criteria. At national level, the legislation specifies for example that "*enterprises that do not conform to the national industrial policy and whose products and processes are eliminated should not participate in direct transactions*"[1210].

In practice, direct electricity trading is executed by the provinces. Companies have to apply to provincial authorities for approval to participate in the direct electricity pilot scheme, and they have to fulfil the eligibility criteria which usually involve technical elements - such as voltage levels - and compliance with environmental regulations. However, in the past some local governments allowed enterprises to participate even after they failed to meet standards[1211].

The conditions applicable in various provinces echo the rules at national level. In Jiangsu, direct electricity contracts are established via a centralized Internet bidding platform. However, only companies which are "*in line with the national industrial policy guidelines such as the Guiding Catalogue for the Industry's Structural Adjustment*" are allowed to participate[1212]. Similar provisions are included in the Gansu province Notice on Printing and Distributing the *Implementation Rules for Direct Transactions between Electricity Users and Power Generation Enterprises in Gansu Province in 2021* and Relevant Work Arrangements which envisages in Article 5: "*Access conditions. (1) Electricity users. 1. Large industrial power users who comply with industrial and environmental protection policies. 2. General industrial and commercial users who comply with industrial, environmental protection and other policies* [...]"[1213]. The Shaanxi 2022 implementation plan for electricity direct transactions also stipulates in Article 3(1) that: "*All industrial and commercial power users* [must] *comply with national industrial policies*"[1214]. The Shandong Energy Administration's *Notice on relevant work concerning electricity market transactions in the whole province in 2021* also provides in Article 1(1): "*Electricity users who do not conform to the national industrial policy will not participate in market-oriented transactions for the time being. Electricity users whose products and processes*

1209 Notice of Issuing the Basic Rules for Medium- and Long-Term Electricity Trading Development and Reform Energy Regulation [2020] No. 889, available at: http://www.gov.cn/gongbao/content/2020/content_5532632.htm (accessed on 17 August 2023).

1210 Notice of Issuing the 'Basic Rules for Medium- and Long-Term Electricity Trading Development and Reform Energy Regulation' [2020] No. 889, article 14(2)2.

1211 As an example, in 2017, the Hubei provincial government cancelled voltage requirements for high-tech companies which consumed large amounts of electricity. See: Government administrative intervention is the largest problem holding power sector reform back, available at: http://www.escn.com.cn/news/show-405289.html (accessed on 14 November 2022).

1212 See Commission Implementing Regulation (EU) 2018/1690 of 9 November 2018 imposing definitive countervailing duties on imports of certain pneumatic tyres, new or re-treaded, of rubber, of a kind used for buses or lorries and with a load index exceeding 121 originating in the PRC and amending Commission Implementing Regulation (EU) 2018/1579 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of certain pneumatic tyres, new or re-treaded, of rubber, of a kind used for buses or lorries, with a load index exceeding 121 originating in the PRC and repealing Implementing Regulation (EU) 2018/163, *OJ L 283, 12.11.2018, p. 1–124*, rec. 407.

1213 See at: https://www.gsei.com.cn/html/1668/2020-11-06/content-300004.html (accessed on 17 August 2023).

1214 See at: https://news.mysteel.com/21/1207/14/5437F998346F1250.html (accessed on 14 November 2022).

belong to the eliminated and restricted categories in the 'Industrial Structure Adjustment Guidance Catalogue' will strictly implement the existing differential electricity price policy"[1215].

Apart from specifying which enterprises are eligible for the direct electricity trading, the rules also clarify that there are a number of industries not eligible to participate. Those industries should be subject to the standard rules, including the differentiated price policy in case of capacities which should be eliminated. As an example, the notice released by the Chongqing Economic and Information Commission on Printing and Distributing the *Implementation Plan for Reducing Electricity Costs of Related Enterprises in 2020* lists the industries excluded from the direct electricity trading in Article 2(3): "*The key industrial enterprises in the above implementation scope must comply with national industrial policies, environmental protection policies, and energy consumption limits per unit of product. Industries or enterprises that the state clearly stipulates that cannot be subsidized with financial funds, such as steel, cement, electrolytic aluminium, and flat glass, are not included in the implementation scope*"[1216].

The eligibility criteria in Hebei for electricity users include the following provision: "*Among the users, the power users that do not comply with national industry policies temporarily cannot participate in the market transactions. Power users whose products and technologies are among the restricted or prohibited category of the "Guiding catalogue for the Industrial structural adjustment" shall strictly implement the differentiated power price policy*"[1217].

The process of the verification of participating enterprises in Chongqing is as follows[1218]:

- Enterprise declaration. All industrial enterprises that fall under the scope of the rules stipulated in the document and meet the relevant conditions can report to the local county economic information committee.
- Review by the regional authorities. The relevant district and county economic information committees shall take the lead in reviewing whether the declared enterprises comply with the national industrial policies, environmental protection policies and the authenticity of materials.
- Municipal review. The relevant Municipal Commission reviews compliance with national industrial polices, with environmental protection policies, as well as the requirements for energy consumption per unit product.
- Online publicity. The Municipal Economic Information Commission publicises on the Internet the list of enterprises that they found to be eligible.

Direct electricity trading is economically important, both in terms of volume of trade and enterprises participating and the cost savings they achieved.

1215 See at: http://nyj.shandong.gov.cn/art/2020/11/25/art_100393_10054187.html (accessed on 17 August 2023).

1216 Available at: https://news.bjx.com.cn/html/20200903/1101663.shtml (accessed on 17 August 2023).

1217 See the 2020/1356 Notice of the Hebei DRC as to organising the registration of participants to the power direct transaction market in Hebei's South part, available at: http://hbdrc.hebei.gov.cn/web/web/xxgkzhzwtztg/2c947384745e347c01746bd1acfb59a7.htm (accessed on 8 September 2023).

1218 Full text of the plan available at: https://news.bjx.com.cn/html/20200903/1101663.shtml (accessed on 17 August 2023).

According to official statistics, in 2021, the total amount of medium- and long-term electricity direct trade in the national electricity market was 3 040.5 billion kWh, an increase of 22.8% compared with the previous year[1219].

The number of participating companies is also growing substantially. In Hebei province, 119 new user entities were added to the list of eligible users, along with 2 electricity providers in 2019 (while in 2016 the numbers of new direct electricity trading users for Hebei were 123 and 50, respectively)[1220]. The selected users included enterprises from the pharmaceutical sector, mining sector, steel and aluminium industry, automotive industry, and chemical industry, among others.

The Commission found during its pneumatic tyres investigation that although prices are supposed to be negotiated directly between the power generators and the power user, the final contract was also signed by the local state grid company, and the invoices to the companies were actually still issued by the state grid company. In addition, all signed direct purchase contracts needed to be submitted to the local government for the record[1221]. All this strongly suggests that the lower prices offered via the direct electricity trading are only available to a group of companies, which follow the official governmental economic agenda. In those circumstances, the possibility of direct electricity trading constitutes a considerable advantage as compared to the remaining companies, which have to purchase electricity from the grid at a higher cost.

The findings of another past Commission investigation revealed that the group of enterprises allowed to enter into the direct contracts was expanded in 2018, however the procedure is still highly regulated and benefitting only specific companies or industries. Specifically, the investigation found the following:

In 2018, the Government of China issued the Circular of the National Development and Reform Commission and the National Energy Administration on Actively Promoting the Market-oriented Power Transactions and Further Improving the Trading Mechanism (Fa Gai Yun Xing [2018] No. 1027). However, the Commission notes that this legislation was issued during the investigation period and has not been implemented yet. Furthermore, although the Circular aims to increase the number of direct transactions on the electricity market it specifically mentions certain industries, including the building materials industry and high-tech industries, as supported and benefitting from liberalization of the electricity market. In particular, the circular provides that 'supporting users with annual electricity consumption of more than 5 million kWh to conduct direct electricity transactions with power generation enterprises. In 2018, electricity generation plans for coal, iron and steel, non-ferrous metals, building materials and other four industries will

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1219 China Electricity Council, 2021 Economic Operation Report of China's Power Industry available at: http://lwzb.stats.gov.cn/pub/lwzb/tzgg/202205/W020220511403033990320.pdf (accessed on 17 August 2023).

1220 See the full 2019 list: https://news.bjx.com.cn/html/20181205/946587.shtml (accessed on 17 August 2023) and the 2016 list: http://info.hebei.gov.cn/eportal/ui?pageId=1966210&articleKey=6601777&columnId=330035 (accessed on 8 September 2023).

1221 See Commission Implementing Regulation (EU) 2018/1690, rec. 468.

be liberalized'. In addition, the Circular points out that 'supporting emerging industries with high added value, such as high-tech, internet, big data and high-end manufacturing industries, as well as enterprises with distinct advantages and characteristics and high technology content, to participate in transactions, free from voltage levels and power consumption restrictions'. Therefore, the legislation provides for a selective application of direct transactions on the electricity market to certain industries such as the building materials and high-tech industries. This selective application has the result of applying cheaper prices for electricity by the State to companies from these industries[1222].

10.2.2.3. FINANCIAL BENEFITS TO PARTICIPATING ENTERPRISES

Savings made by individual companies are considerable, for example:

- Tianshan Aluminium and Tianfu Thermal Power signed the Power Cooperation Agreement, which stipulated that Tianfu Thermal Power would guarantee 3 billion kWh of power supply to Tianshan Aluminium every year to ensure the power consumption other than the power generated by Tianshan Aluminium's own power plant (the captive electricity production accounts for 87% of Tianshan Aluminium's consumption). According to estimates, the combined electricity cost of own electricity and electricity purchased via direct power supply contract of the enterprise was RMB 0.1581 per kWh (including tax), while in December 2019, the weighted electricity price of China's electrolytic aluminium industry was RMB 0.3109 per kWh (tax included), so the total savings were considerable[1223].
- Qinghai Branch of Aluminium Corporation of China Limited (Chinalco – the largest state-owned aluminium producer in China) secured a considerable reduction of costs thanks to direct power purchase. According to the CEO of the company, Chinalco Qinghai was facing the risk of a production reduction. It is thanks to the considerable price cuts due to direct power trading that the company could reach full production and even make some profit[1224].
- Anyang Steel received 900 million kWh of direct electricity supply from power plants, reducing utility expenses by RMB 60 million. This was done under the coordination of the Anyang Government[1225].
- Jiyuan Jinli Group and Wanyang Group, two non-ferrous metal smelting enterprises in Henan concluded electricity deals for 100 million kWh and 115 million kWh,

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1222 See Commission Implementing Regulation (EU) 2020/776 of 12 June 2020 imposing definitive countervailing duties on imports of certain woven and/or stitched glass fibre fabrics originating in the PRC and Egypt and amending Commission Implementing Regulation (EU) 2020/492 imposing definitive anti-dumping duties on imports of certain woven and/or stitched glass fibre fabrics originating in the PRC and Egypt, OJ L 189, 15.6.2020, p. 1–170, recitals 529 and 530.

1223 See Sinolink Securities. *Specific report on aluminium 2020*, page 15, available at: http://pdf.dfcfw.com/pdf/H3_AP202005181379889815_1.pdf (accessed on 17 August 2023).

1224 Chinanews (13 January 2017). *Direct electricity trade in Qinghai exceeds 20 bn kWh for the first time*; available at: http://www.chinanews.com/m/cj/2017/01-13/8123137.shtml (accessed on 17 August 2023).

1225 Caixin (2016), available at: http://m.weekly.caixin.com/m/2016-01-29/100905030_2.html (accessed on 17 August 2023).

respectively. The direct trading deals cut their costs by RMB 3.61 million and RMB 4.15 million, respectively[1226].

- China Resources Textile (Hefei) Limited Corp. made savings of RMB 3 million and Hefei BOE Photoelectric Technology Limited Corp. made savings of 32 RMB million in 2016 thanks to direct trading and government concessions[1227].

It can be concluded that in their current configuration and with still a limited number of participants, direct electricity trading is a phenomenon leading to considerable distortions with regard to electricity costs for individual companies.

10.2.3. Captive Power Plants

In case of some very energy intensive energy industries, such as aluminium, the smelters might operate captive power plants, allowing them to reduce their energy cost.

A captive power plant is a power generation facility dedicated to providing localised power for a single energy user, such as a large factory. The number of captive power plants has grown rapidly in China since the 1980s, when the State realised that electricity shortages, poor infrastructure and government-exclusive power supply was stalling economic growth[1228]. They expanded quickly in high-energy consumption industries such as aluminium, chemicals, pulp and paper, steel and cement, etc. In China, two types of captive power plants are typically operated: coal-fired and those using excess heat and waste. The latter is very clean, but relatively uncommon. The government is encouraging the development of power generators using excess heat or other waste, while curbing the expansion of coal-fired captive power plants.

As of end 2016, captive power capacity exceeded 142 GW (of which 115 GW was coal-fired), accounting for 8.6% of the national total in that year, according to the NDRC[1229]. Xinjiang and Shandong have the largest installed captive power capacity, mainly as a result of their aluminium industries. As of end 2016, Xinjiang's captive power capacity was 24.93 GW. Though captive power plants only make up 30% of Xinjiang's power capacity, they generate over 63% of electricity consumed in the region[1230]. As of end 2015, Shandong had 30.43 GW of installed captive power plant capacity, making up 31.12% of the provincial total[1231].

In addition, according to a 2017 report, two major aluminium smelters started important projects as from 2010: Weiqiao Group constructed or began constructing 24 GW of captive coal power plants and, at the same time, Xinfa Group added 14 GW of built or under construction capacity. In addition, both companies built those plants using inefficient technologies, without authorisation and in violation of environmental laws. For example, the

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1226 See Henan government website (2016), available at: http://www.henan.gov.cn/jrhn/system/2016/09/11/010671121.shtml (accessed on 17 August 2023).

1227 Zhong-An Anhuai Online Daily (23 January 2017): *What does direct electricity trade bring?*.

1228 Beijixing : *"Is it too difficult to program a self-powered power plant?"*, available at: https://news.bjx.com.cn/html/20211122/1189355.shtml (accessed on 17 August 2023).

1229 *Ibid.*

1230 Sina Finance: *Xinjiang's self-provided power plant blowout development risk*, available at: http://finance.sina.com.cn/roll/2017-02-20/doc-ifyarrcc8045364.shtml (accessed on 17 August 2023).

1231 NDRC: *Comprehensively clean up government funds and additional owed by self-provided power plants*, available at: https://news.sina.com.cn/o/2017-07-25/doc-ifyihmmm8640414.shtml (accessed on 17 August 2023).

coal power generators of Weiqiao in the Binzhou prefecture, with a capacity of about 14.4 GW, are 16% less efficient than modern plants in terms of CO_2 emissions per kWh[1232]. The core motivation for aluminium producers' development of captive power plants is their low-cost electricity. Producing one tonne of electrolytic aluminium requires a lot of electricity. While traditionally producing one tonne required more than 14 000 kWh, some enterprises managed to reduce the electricity consumption per tonne to below 13 500 kWh[1233], which however still constitutes a very large proportion of the total production cost. According to the International Energy Institute, 85.4% of aluminium smelters in China had a captive power plant in 2015[1234]. The proportion of captive power capacity in the electrolytic aluminium industry reached about 75%[1235] at the end of 2015 and remained above 70% for two consecutive years. Due to the impact of production restrictions and environmental regulation, the proportion of captive power capacity in the sector dropped to about 67% by the end of 2018[1236]. According to estimates, it was at the level of about 65% by the end of 2020[1237].

In November 2021, the *Opinions of the Central Committee of the Communist Party of China and the State Council on Deepening the Battle of Pollution Prevention and Control* envisaged that in principle, no new self-provided coal-fired units would be added and the 14th FYP for National Cleaner Production Implementation stated that self-provided coal-fired power plants should actively promote clean and low-carbon energy and industrial waste heat replacement[1238].

However, other developments in 2021 have also shown that this trend could be reversed. Notably, in November 2021, the General Department of the NEA issued the *Notice on Strengthening Market Supervision, Effectively Playing the Role of Market Mechanisms, and Promoting Power Supply Guarantee this Winter and Next Spring*, urging the closed captive power plants to resume activities[1239]. Article 16 of the document provides the following:

> *Urge the self-provided power plants to be fully opened. All dispatched agencies should urge relevant local government departments to strengthen the supervision and management of self-provided power plants. During the period of energy supply guarantee, power dispatching agencies and power grid enterprises should supervise*

1232 Slater, H. – Captive Power Plants: Navigating Regulatory Grey Areas (2017); available at: https://chinadialogue.net/zh/4/43721/ (accessed 8 March 2024)

1233 Sina Finance: *The proportion of self-provided electricity production capacity in electrolytic aluminium operation capacity shows a downward trend*, available at: https://finance.sina.com.cn/money/future/indu/2020-12-02/doc-iiznezxs4833671.shtml (accessed on 18 August 2023).

1234 Fickling, D. (2016). *China isn't the reason U.S. Aluminium is suffering*, Bloomberg, available at: https://www.bloomberg.com/gadfly/articles/2016-10-10/china-isn-t-the-reason-u-s-aluminum-is-suffering (accessed on 14 November 2022).

1235 Only the major aluminium smelters have fully independent electricity grids, the other enterprises purchase from the grid and add some more from their own captive plants.

1236 Sina Finance : *The proportion of self-provided electricity production capacity in electrolytic aluminium operation capacity shows a downward trend*, available at: https://finance.sina.com.cn/money/future/indu/2020-12-02/doc-iiznezxs4833671.shtml (accessed on 18 August 2023).

1237 Reuters: https://www.reuters.com/business/sustainable-business/china-aluminium-sector-must-shut-inefficient-coal-power-meet-climate-goals-2021-02-07/ (accessed on 18 August 2023).

1238 See Article 2.6 of the document. Full text available at: https://www.mee.gov.cn/zcwj/zyygwj/202111/t20211108_959456.shtml (accessed on 18 August 2023).

1239 Available at: http://zfxxgk.nea.gov.cn/2021-11/10/c_1310306675.htm (accessed on 18 August 2023).

and urge coal-fired self-provided power plant units to start up no less than the average utilization hours of the previous three years. Enterprises with standby power plants shall not purchase more than the average amount of electricity purchased from the power grid in the previous three years, and the purchase price of electricity shall strictly comply with national policies and regulations.

According to Article 18:

Strengthen the management of self-provided power plants in high energy-consuming industries. For self-provided power plants in high-energy-consuming industries that violate relevant regulations, the power dispatching agency may, in the event of an emergency, on the premise of maintaining normal security power consumption, in accordance with the Regulations on the Management of Power Grid Dispatching and the Measures for the Management of Orderly Power Consumption, etc. take relevant measures for users in industries with high energy consumption.

Captive power plants' electricity generation costs can be considerably lower than grid prices (see the example of Taishan Aluminium in Section 10.2.1 above). According to press statements, other aluminium producers also benefit from very low self-generated electricity prices: "*The cost of electricity generation in Shandong Weiqiao Group's self-provided power plant in 2016 was less than RMB 0.35. According to the electricity price level of RMB 0.6 to RMB 0.64 per kWh of local large industrial enterprises in Shandong, the annual self-provided power plant can save RMB 100 million in electricity costs*"[1240]. In Xinjiang, where coal resources are abundant, electricity generation is even cheaper. Therefore, captive power plants ownership is core to firms' ability to compete and survive in the market.

Captive power plants are subject to a number of rules and regulations, require special permissions for construction and are required to contribute to various financial funds. However, as will be described below, the local governments have given a lot of leeway to enterprises by allowing them to default on these commitments.

In 2013, the State Council released the *Air pollution prevention and control action plan* (more commonly known as the *Ten guidelines on air pollution*), which banned the emergence of new captive coal power plants in the Beijing–Tianjin–Hebei Region, Yangtze River Delta and Pearl River Delta. However, captive power plants still emerged in these regions after 2013, as established in 2018 by the Central Environmental Inspection Group, which found evidence of local governments providing leeway to illegally constructed captive plants[1241]. For instance, Hongqiao (the largest aluminium producer in the world) constructed 45 illegal new coal-fired captive power units (generators) in Binzhou since the ban on construction in 2013, with a total

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1240 Beijixing: *"Is it too difficult to program a self-powered power plant?"*, available at: https://news.bjx.com.cn/html/20211122/1189355.shtml (accessed on 18 August 2023).

1241 Shaerer, C., Yu, A., Nace, T. (2018). *Tsunami warning - can China's central authorities stop a massive surge in new coal plants caused by provincial overpermitting?*, Global Energy Monitor, p. 11; available at: https://globalenergymonitor.org/wp-content/uploads/2021/01/TsunamiWarningEnglish.pdf (accessed on 18 August 2023).

installed capacity of 16.895 million kilowatts[1242]. Xinfa, another major aluminium producer in Binzhou, Shandong, was also found to have constructed nine illegal captive power plants under local government consent since 2013, with a total installed capacity of nearly 6 million kilowatts[1243] . As a result, in May 2018, Shandong published its first *Shandong Province Implementing the Rectification Plan of the Central Environmental Protection Supervision Group Inspector Feedback*, aiming at rectifying the illegalities[1244].

Following State Council's 2015 release of *Several opinions on further deepening the power sector reform*, which set out general rules for the energy reform in China, a set of six documents was published, aiming to regulate selected areas of energy supply. It included a document titled *Guiding opinions on strengthening the supervision and regulation on coal-fired captive power plants*, which was released in November 2015. It set out a number of criteria for the construction and operation of the captive power plants, including a requirement that the plant undertake their social responsibilities and pay various fees[1245].

In May 2017, NDRC and NEA released the *Notice on organising special inspections on coal captive power plants and regulating their operations* and began with MIIT, MOF and the Ministry of Ecology and Environment (at that time the Ministry of Environmental Protection) joint supervision in Xinjiang, Shandong, Inner Mongolia, Jiangsu, Guangxi and Gansu Guangxi, Jiangsu and Shandong[1246]. As a result of the inspections, it became apparent that there are a number of irregularities. Consequently, on 22 March 2018, NDRC called for comments on '*Regulations on coal-fired captive power plants' construction and operation*'[1247]. The document identified a number of problems relating to captive power plants; furthermore, it stipulated that the construction of power plants lacking necessary approvals or not included in the plan should be suspended and, secondly, obliged the enterprises running captive power plants to pay the outstanding fund debts. In October 2021, NDRC and NEA released the *Notice on Carrying Out Nationwide Retrofitting and Upgrading of Coal-fired Power Units*, where point 7.1 includes the following provisions: '*Seriously investigate and deal with violations of laws and regulations, such as illegal approval, construction without approval, non-conformity*

1242 *Weiqiao was named again for building 45 generating units in violation of regulations due to its own power plant*, available at: https://baijiahao.baidu.com/s?id=1601971521896665057&wfr=spider&for=pc (accessed on 18 August 2023).

1243 *Ibid*.

1244 Full text of the plan: https://www.mee.gov.cn/xxgk2018/xxgk/xxgk15/201805/t20180529_630199.html (accessed on 18 August 2023).

1245 Full text available at: http://nyj.jl.gov.cn/zcfg/201904/W020190417316353553379.pdf (accessed on 18 August 2023).

1246 Sina Finance: The NDRC and 4 ministries and commissions inspected self-owned power plants, focusing on random inspections in 6 provinces including Xinjiang, Inner Mongolia, Guangxi, and Shandong, available at: http://finance.sina.com.cn/money/future/indu/2017-06-15/doc-ifyhfpat4841504.shtml (accessed on 18 August 2023), the Notice of the General Office of the NDRC and the General Department of the National Energy Administration on carrying out special inspections on the standardized construction and operation of coal-fired self-provided power plants (document 2017/329 from 13 June 2017) and NDRC Guiding Opinion on strengthening supervision and management of coal-fired captive power plants (document 2015/9).

1247 Available at: https://news.bjx.com.cn/html/20180328/888343.shtml (accessed on 18 August 2023).

with approved construction, unauthorized changes, or power supply beyond the supporting projects of self-provided units.'[1248]

A number of strict rules govern also the construction of new captive power plants, which set out a number of criteria, obligations and fees for the companies operating their own coal-fired power plants. As an example, the 2017 Shanxi *Notice on the Measures for the Administration of the Construction and Operation of Coal-fired Power Plants in Shanxi Province*[1249] required that the new plants should implement unified planning, unified management, and unified responsibilities and obligations (Article 4). The captive plants need to fit into the provincial planning (Article 13), need to strictly enforce energy efficiency and environmental requirements (Article 14), plants should be of high efficiency (Article 15), all documentation must be obtained before the construction (Article 16), there must be a power generation plan applicable for the captive power plants which must be included in the annual power generation control target management of the provincial and municipal electric power operation departments (Article 24), it needs a safety management system (Article 26), install desulfurization, denitrification, dust removal and other environmental protection facilities in accordance with the ultra-low emission standards (Article 27). In addition, according to Article 28: '*The operation of self-provided power plants shall comply with the requirements of energy efficiency standards stipulated by relevant industrial policies*'. The enterprises running captive plants also need to pay towards the cross-subsidies and for a number of government funds (Article 31).

Apart from being illegally constructed, coal-fired captive power plants do not necessarily respect all relevant standards that apply to power plants that supply electricity to the public, especially in terms of environmental rules. Some producers were reported to have used inferior and more environmentally damaging cheap coal for power production to lower costs, an option not available for normal coal-fired power plants. The massive ultra-low emission reform and campaign eliminating small-scale coal fired power units has yet to reach the majority of coal-fired captive power plants[1250]. According to estimates, China would need to shut down 47 GW of coal power capacity relating to aluminium production (including captive power plants) in the next decade to achieve the environmental goal of carbon neutrality by mid-century[1251].

1248 Notice on Carrying Out Nationwide Retrofitting and Upgrading of Coal-fired Power Units issued by NDRC and NEA on 29 October 2021, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202111/t20211103_1302856_ext.html (accessed on 18 August 2023).

1249 Available at: http://www.lishi.gov.cn/zwgk/sjwj/201706/t20170629_579535.shtml (accessed on 18 August 2023).

1250 In the case of the most stringent self-provided power plant rectification plan in history, Shandong Weiqiao faces operational risks: https://www.sohu.com/a/228782071_249929 (accessed on 18 August 2023).

1251 See Reuters: https://www.reuters.com/business/sustainable-business/china-aluminium-sector-must-shut-inefficient-coal-power-meet-climate-goals-2021-02-07/ (accessed on 5 July 2023). Aluminium production is a main producer of CO2 in China, some 82% of the energy used in domestic primary aluminium production came from coal in 2021 (more than 75% of CO2 emissions from China's metals industry came from the aluminium industry). See at: https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/china-delays-metals-sector-s-climate-target-amid-slow-shift-to-renewables-73247390 (accessed on 21 August 2023).

Local governments can also facilitate the illegal operation of captive power plants. For example, in 2015, Huozhou Coal Electricity Group's captive power plants both operated without official approval and discharged excessive pollutants. Though there have been multiple reports on the Group's illegal activities since 2012, it has managed to escape severe punishment. Industry insiders attribute this to negligence by the local environmental protection bureau, and the fact that Huozhou is a provincial SOE[1252].

There is also evidence of local governments reducing various fees for industrial producers. For instance, Tianshan Aluminium's captive power plants use the Shihezi regional grid for power transmission. In 2017, the grid signed a deal with Tianshan Aluminium promising that as long as Tianshan purchases over 300 million kWh of electricity from Tianfu Energy (the state-owned power generation company that owns and operates the Shihezi regional grid), Tianshan's captive power plants will be exempt from grid transmission fees[1253].

Governments can also subsidise coal-fired captive power plants by ensuring their access to cheap coal. This practice is most common in regions with abundant coal. For example, in 2012, Xinjiang adopted a project-oriented coal strategy, which would guarantee adequate coal supply for Xinfa's aluminium production project in Xinjiang. Media quotes suggested that this coal was either supplied for an extremely low price or granted for free[1254].

Finally, it was shown that certain enterprises falsify carbon emissions data to pay lower fees in the framework of carbon emissions trading scheme, to which the captive power plants also participate[1255]. In 2022, the MEE announced a list of outstanding environmental issues pertaining to the carbon emissions trading scheme. The list included carbon emission data falsification by Erdos High-Tech Materials (located in Inner Mongolia) for its captive coal fired power plants: two sets of 50 megawatts, four sets of 135 megawatts and two sets of 330 megawatts self-provided coal-fired units[1256]. Similar problems had been encountered in other regions. For example, according to the 2022 *Baise City Implementing the Ministry of Ecology and Environment's Rectification Work Plan for Special Supervision, Assistance and Feedback on the Quality of Carbon Emission Reports of Power Generation Industry Control Enterprises*, the municipality needed to rectify 65 problems existing in nine enterprises, including Guangxi

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1252 Sina Finance: *Two companies from Huozhou Coal and Electricity Group are listed on the Shanxi Environmental Protection Black List*, available at: https://finance.sina.cn/chanjing/gsxw/2015-05-22/detail-ichzzmnf0460648.d.html (accessed on 18 August 2023).

1253 See Hua Chuang Securities Report: Cost-leading aluminum companies are not afraid of cyclical fluctuations in aluminum prices, available at: http://pdf.dfcfw.com/pdf/H3_AP202006111384211412_1.pdf (accessed on 18 August 2023).

1254 Energy Magazine: *Xinfa betting on Xinjiang and developing circular modes,* available at: http://finance.sina.com.cn/chanjing/gsnews/20120806/113012768139.shtml (accessed on 18 August 2023).

1255 According to the *2019-2020 National Carbon Emissions Trading Quota Total Setting and Allocation Implementation Plan (Power Generation Industry)*, power generation enterprises that emit 26,000 tons of carbon dioxide equivalent or more in any year from 2013 to 2019 are included in the key emission units in the national carbon market. Self-provided power plants in other industries that meet this threshold are treated as power generation enterprises.

1256 Will the self-provided power plants become a "dead corner" again this time?, available at: https://www.peopleweekly.cn/html/2022/rmrm_0328/117905.html (accessed on 8 September 2023).

Tiandong Jinsheng Chemical Co., Ltd., Guangxi Xinfa Aluminium Electricity Co., Ltd., Tianyang Nanhua Paper Co., Ltd. and other six captive power plants[1257].

10.3. COAL AS THE MAIN SOURCE OF ENERGY IN CHINA

10.3.1. OVERCAPACITY

Substantial subsidies for the production of coal in early 2000s (see Section 10.3.3) resulted in serious overcapacity in coal production, which in turn drove prices down. Low coal prices created an incentive for the creation of a new coal-fired power generation, as coal-fired power plants were cheap to run and profitable because of depressed coal prices. In 2022 China relied on coal for 60% of its electricity production[1258], followed by hydropower (15%), wind (9%), solar (5%), nuclear energy (5%), gas (3%) and smaller amounts of biofuels (2%) and oil (0,14%)[1259] (see also Section 10.1. for 2021 figures).

The 12th FYP on Coal Industry Development explained the following reasons for the existence of this overcapacity in energy production: "*Though the coal industry has gone a long way, in the course of the development process some problems related the lack of coordination, imbalances, unsustainability have arisen.* [...]"

Overcapacity in turn led to depreciated prices and lack of profitability of the coal production sector. In 2015, 80% of coal firms in China incurred losses[1260]. The State therefore continuously sets targets to lower coal production capacity. In early 2017, the NDRC announced the plan to cut the coal mines capacity by 300 million tonnes by 2020. The 13th FYP on the Coal Industry Development repeated the language of the 12th FYP regarding the reasons for the overcapacity, and then added additional details:

> *Though the coal industry has gone a long way, in the course of the development process some problems related the lack of coordination, imbalances, unsustainability have arisen. Coal production overcapacities: because of the impact of the economic slowdown, of the structural adjustment in the field of energy and other factors, the demand for coal has gone down, and the supply capacity has become excessive.*

The 13th FYP furthermore stated that: "*There are coal production overcapacities and the supply/demand ratio is severely imbalanced.*"

Downstream, there is also serious overcapacity in coal-fired power generation. Even though utilisation rates of coal-fired power plants are falling rapidly with the efforts to replace the old polluting technologies with renewable energy sources, over 110 GW of additional coal-fired power plants were still in construction in 2016 and there were still new investment proposals to

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1257 *Ibid.*

1258 Weerasekara, P. (2023). *China approves coal power surge despite emissions pledge: Greenpeace*; available at: https://phys.org/news/2023-04-china-coal-power-surge-emissions.html (accessed on 15 November 2023).

1259 Our World in Data: Electricity production by source, China (2022); available at: https://ourworldindata.org/energy/country/china#what-sources-does-the-country-get-its-energy-from (accessed on 15 November 2023).

1260 IEA, (2016). *World Energy Outlook 2016*, IEA, Paris.

add additional capacity[1261]. The China Electric Council forecasts that 150 GW of coal capacity will be added between 2020 and 2025, and another 30 GW by 2030[1262]. Maintaining positive returns despite significant overcapacity was possible due to low coal prices, low capital costs, attractive financing, and generous power tariffs[1263].

The 13th FYP repeated the call for reduction in excess coal production capacity. The resulting reforms eliminated 2.5 million coal mining jobs (around 50% reduction) between 2013 and 2019 without however significantly affecting production but concentrating production geographically: 70% of output in 2019 came from three regions: Inner Mongolia, Shanxi and Shaanxi[1264]. The *Key Points of Coal Resolving Overcapacity in 2020* published by the NDRC confirmed that the problem of overcapacity was still not solved and envisaged several measures to tackle the overcapacity problem. It set, among others, the target to achieve the goals of the 13th FYP by the end of 2020, to continue closing coal mines, to eliminate the '*zombie enterprises*' in the coal sector, to close mines producing less than 300 000 tonnes annually, to speed up closures of coal mines that don't meet environmental standards, develop large-scale coal bases in Shanxi, Inner Mongolia, Shaanxi, Xinjiang and other areas, stabilise prices, accelerate mergers and reorganizations, speed up structural adjustment, accelerate transformation and upgrading and promote clean coal production, transportation and utilisation.

The 14th FYP on Modern Energy System Planning also includes a number of targets and measures concerning coal, including a production capacity target of more than 4.6 billion of standard coal, gradual phasing out of coal, promotion of clean and efficient utilisation of coal, strict control of coal consumption in major coal-consuming industries such as iron and steel, chemical industry, cement, etc[1265].

With the coal price increases in 2021 (caused by multiple factors including government decarbonization policies, a ban on coal from Australia, and weather events, specifically, flooding) and the subsequent energy crisis, the progress in coal mines closures achieved by that time was reversed with a governmental decision to intervene into the coal market and a permission to reopen previously closed coal mines. At least 53 coal mines were reopened in 2021 in order to boost production and in result bring the coal prices down[1266]. Furthermore, in 2022, China announced it would keep on building extra coal mine capacity[1267].

Despite the cut in its coal mine capacity, China also continuously adds coal-fired power plant capacity. According to estimates, China put 38.4 GW of new coal-fired power capacity into

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1261 *Ibid.*, p. 226.

1262 Climate Transparency (2022) China: Climate Transparency Report: comparing G20 Climate Action; available at: https://www.climate-transparency.org/wp-content/uploads/2022/10/CT2022-China-Web.pdf (accessed on 17 August 2023).

1263 *Ibid.*, p. 227.

1264 *Ibid*, p. 243.

1265 The Plan for a Modern Energy System during the 14th FYP Period, available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202203/P020220322582066837126.pdf (accessed on 17 August 2023).

1266 See at: https://www.france24.com/en/live-news/20210805-china-restarts-coal-mines-to-meet-surging-power-demand (accessed on 17 August 2023).

1267 See at: https://www.bloomberg.com/news/articles/2022-04-21/china-confirms-it-will-build-extra-coal-mine-capacity-this-year?leadSource=uverify%20wall (accessed on 19 September 2022).

operation in 2020 and in the same year approved the construction of a further 36.9 GW of coal-fired capacity, three times more than a year earlier, bringing the total capacity under construction to 88.1 GW. In mid-2021 China had 247 GW of coal power under development[1268]. China further increased the number of coal-fired power plants under construction in 2022 in a bid to speed economic recovery and promote energy security[1269]. The target of the Government is to keep the annual domestic coal production at 4.1 billion tons and the annual coal consumption should stay at about 4.2 billion tons by the end of the 14th FYP[1270].

It seems that China's constant growth in coal power is not necessarily driven by a need for more coal power[1271], but rather a consequence of the political set up and system of promotions, which is based on local officials meeting the planned targets and setting up new coal fired power plants, even if economically not viable, is the easiest means to achieve those targets[1272]. Overcapacity in coal powered plants in 2019 was estimated at approximately 170 GW, with the most serious problems in North, Northwest, and South China[1273].

As to the coal prices in China, the NDRC issued in 2022 the *Notice on further improving coal market price formation mechanism*, guiding coal prices to float within an approximate range of RMB 570-770 per tonne for medium and long-term trading of benchmark 5 500 kilocalorie thermal coal at Qinhuangdao Port[1274]. Also, in February 2022, the Chinese authorities asked the major state-owned miners, China Shenhua Energy Co. and China Coal Energy Co. among them, to cap their prices once more below RMB 700 a ton to keep pushing the prices down[1275]. With the measures undertaken by the Government, coal prices fell rapidly and gradually remained within a required range, while the profitability of coal companies fluctuated[1276].

10.3.2. DECARBONISATION

China is the world's largest energy consumer and at the same time the largest carbon emitter. Even though China's main energy source is still coal-powered power plants. In September

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1268 Stanway, D. (3 February 2021). *China's new coal power plant capacity in 2020 more than 3 times rest of World's - study*. Reuters; available at: https://www.reuters.com/business/energy/chinas-new-coal-power-plant-capacity-2020-more-than-3-times-rest-worlds-study-2021-02-03/ (accessed on 21 August 2023).

1269 See at: https://www.reuters.com/markets/commodities/china-starts-building-33-gw-coal-power-2021-most-since-2016-research-2022-02-24/ (accessed on 21 August 2023).

1270 Xinhuanet (2021), available at: http://www.xinhuanet.com/2021-03/03/c_1127163835.htm (accessed on 21 August 2023).

1271 Bahr, A. (25 November 2020): *China's coal capacity surge need not be at odds with ambitious climate action;* available at: https://chinadialogue.net/en/energy/chinas-coal-capacity-surge-need-not-be-at-odds-with-ambitious-climate-action/ (accessed on 21 August 2023).

1272 Dupuy, M. (11 May 2021). *Guest post: Why would anyone finance another coal power plant in China? Carbon Brief*; available at: https://www.carbonbrief.org/guest-post-why-would-anyone-finance-another-coal-power-plant-in-china/ (accessed on 21 August 2023).

1273 Chi, J., Wang, B., Zhang, H., Kang, J., Lu, T., Huang, Y., Yang, W., Zhang, H., Sun, L. (2021). *Regional coal power overcapacity assessment in China from 2020 to 2025.* Journal of Cleaner Production, 303, 127020; available at: https://doi.org/10.1016/j.jclepro.2021.127020 (accessed on 21 August 2023).

1274 See at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202202/t20220225_1317003.html?code=&state=123 and https://en.ndrc.gov.cn/news/mediarusources/202202/t20220225_1317146.html (accessed on 21 August 2023).

1275 See at: https://www.bloomberg.com/news/articles/2022-02-16/china-stops-coal-price-reporting-to-crack-down-on-rally (accessed on 21 August 2023).

1276 See at: https://pdf.dfcfw.com/pdf/H3_AP202212291581489919_1.pdf?1672341243000.pdf (accessed on 17 August 2023).

2020, the Chinese president announced China's aim to have CO2 emissions peak before 2030 and to achieve carbon neutrality before 2060. The 2060 climate target was officially submitted in a nationally determined contribution ('*NDC*') to the United Nations Framework Convention on Climate Change ('*UNFCCC*') in October 2021 with the title 'China's Achievements, New Goals and New Measures for Nationally Determined Contributions'.

An important element which will have an impact on the use of coal in China was the launch of the national emissions trading system ('*ETS*') in 2021. It is the largest ETS globally and as from mid-2021 the Chinese national ETS started trading on the trading platform operated by the Shanghai Environment and Energy Exchange ('*SEEE*'). The purpose of the ETC is to limit emissions, which fits into the general policy target of China moving from the fossil fuels towards renewable energy.

The average carbon price in 2022 was at CNY 55.30/tCO2 (USD 8.20 / EUR 7.04)[1277]. Although it is expected to go up to CNY 87/tCO2 by 2025 and to CNY 139/tCO2 by 2030[1278] this is still significantly lower than the carbon price in the EU. At the same time, China's carbon market covers three times the amount of emissions traded in the EU, with the likelihood to more than double upon inclusion of aluminium and cement as well as other heavy industry and manufacturing[1279].

10.3.3. Coal Subsidies

Even though China intends to gradually diminish the share of coal, there are still considerable subsidy programmes to support coal extraction and coal-fired electricity generation[1280]. According to estimates by the International Institute for Sustainable Development ('*IISD*'), the subsidies to coal-fired generation in China was at least RMB 252 billion in 2014 and RMB 120 billion in 2015[1281], and the subsidies to coal production amounted to RMB 35.7 billion, excluding credit support worth between RMB 3.5 and 35.7 billion[1282]. The IISD identified 14 subsidies to coal-fired power generation and 18 subsidies to coal production. The most significant subsidies to coal production included: temporary tax and fee relief from provincial and local governments; investment in fixed assets from the State budget; compensations for the coal mines that are shut down in the coal phase-out plan; value-added tax ('*VAT*') rebates; direct subsidies to listed coal companies; coal-bed methane production subsidies; research and development support from the State budget and a special fund for risky exploration of overseas

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1277 See at: https://icapcarbonaction.com/en/ets/china-national-ets (accessed on 15 November 2023).

1278 See at: https://www.statista.com/statistics/1175780/china-estimated-average-prices-in-the-ets/ (accessed on 15 November 2023).

1279 See at: https://www.forbes.com/sites/energyinnovation/2022/04/18/chinas-emissions-trading-system-will-be-the-worlds-biggest-climate-policy-heres-what-comes-next/?sh=1a03ce42d594 (accessed on 15 November 2023).

1280 See Section10.3.1.

1281 Denjean, B., Su, T., Attwood, C., Bridle, R., Duan, H. and Gerasimchuk, I. (2016). *Subsidies to Coal Power Generation in China*. Geneva: GSI, available at: https://www.iisd.org/sites/default/files/publications/subsidies-coal-power-generation-china.pdf (accessed on 17 August 2023).

1282 Xu, H., Wang, H., Bridle, R., Garasimchuk, I. and Attwood, C. (2015). *Subsidies to Coal Production in China*, Geneva: IISD, 2015. https://www.iisd.org/sites/default/files/publications/subsidies-coal-production-in-china.pdf (accessed on 17 August 2023).

mine resources[1283]. Support to coal-fired electricity production includes mergers and acquisitions support, subsidies to 'zombie' companies, subsidies for investment in emissions abatement equipment, power grid investment, as well as credit support[1284]. In 2020, the subsidies for coal in China were estimated at USD 1.55 billion[1285] (ca. EUR 1.41 billion). In 2022 China announced it would inject additional RMB 10 billion into its coal-fired power plans to provide financial relief and improve power supply[1286].

10.4. CHAPTER SUMMARY

China is currently the world's largest power producer. Around 50% of the power generation capacity is state-owned as well as the entire transmission grid. 18 SOEs controlled by the central SASAC are active in the energy sector.

The energy market has undergone several changes and reforms and as part of these reforms, with the aim to create competition in the energy market. Central price setting and planning was gradually limited, and the electricity prices were to some extent marketised. However, despite those efforts, the energy prices in China are still not fully market based, but still controlled by the state to a high degree.

One of the most important issues is the way in which prices are differentiated for various industrial users. Price differentiation is a common practice, for instance there are usually different electricity tariffs for customers consuming large quantities, or energy used in off-peak periods is usually cheaper, or the residential and industrial consumers are subject to different rates. However, the price differentiation observed in China appears to favour certain encouraged industries (or even individual enterprises) and discourage others, and the report provides some examples at the provincial level.

The problem is aggravated by the policy of promoting direct power purchase. Participation in this scheme is linked to meeting certain eligibility criteria which pursue policy objectives. These criteria in themselves are already problematic because they provide cheap energy only to a subset of industries. The aim of energy saving, and environmental protection is misplaced in this context. Moreover, the available documents suggest that the purpose of the provision of cheap energy goes beyond promoting energy saving and the protection of the environment, but in some cases simply aims at reducing the electricity costs of certain sectors.

Many enterprises in the most energy-intensive industries operate their own captive coal-fired power plants, which are often constructed or operating in breach of the legal requirements. Local governments, by not implementing the strict rules pertaining to the construction and

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1283 *Ibid.*

1284 Denjean, B., Su, T., Attwood, C., Bridle, R., Duan, H. and Gerasimchuk, I. (2016). *Subsidies to Coal Power Generation in China*. Geneva: GSI, available at: https://www.iisd.org/sites/default/files/publications/subsidies-coal-power-generation-china.pdf (accessed on 17 August 2023).

1285 Climate Transparency (2022) China: *Climate Transparency Report: comparing G20 Climate Action*, available at: https://www.climate-transparency.org/wp-content/uploads/2022/10/CT2022-China-Web.pdf (accessed on 17 August 2023).

1286 See at: https://www.nasdaq.com/articles/china-to-inject-%241.5-bln-to-help-state-coal-fired-power-firms (accessed on 21 August 2023).

operation of the captive power plants, contribute to the fact that those enterprises benefit from distorted electricity prices.

Finally, it is noted that China provided in the past considerable subsidies to coal production, which in turn triggered the construction of coal-fired power plants to an extent leading to serious oversupply of electricity from this source.

Given the significant State presence and intervention into energy production, pricing and planning, the overall picture emerging is one where normal market considerations do not prevail on the Chinese market for energy.

11. CAPITAL

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11.5. Chapter Summary 315

11.1. INTRODUCTION

This chapter examines distortions in relation to capital. For this purpose, it assesses differences in access to and cost of capital for different groups of Chinese economic operators, notably SOEs and private businesses, as well as the handling of debt-at-risk. The examination of the handling of debt-at-risk covers a broad range of issues; in particular, it identifies the extent of bad or non-performing loans in the Chinese banking system and the government's response to such loans.

11.2. ACCESS TO CAPITAL

As explained in Chapter 6, the Chinese financial system is characterised by a strong state presence and regulatory controls. As a result, access to capital in China is not equally available to all market participants and is biased in favour of enterprises with ready access to the formal

financial system. SOEs and private businesses with close ties with government, as well as businesses in encouraged sectors, are best placed to take advantage of available capital[1287], thus crowding out other players in the market, who are forced to turn to so-called shadow banking products to satisfy their financing needs[1288].

11.2.1. Disproportionate Allocation to SOEs

A range of studies has found that state ownership in China is positively associated with leverage and access to long term debt, thus creating a positive loan bias[1289]. The OECD noted, as recently as 2022, that SOEs hold most of China's corporate debt due to better access to borrowing relative to private firms[1290]. The availability of political connections to help in obtaining bank loans is also a factor for private firms[1291].

This bias in favour of SOEs is visible, inter alia, in statistics on the share of loans by ownership type. In 2010-2014, the share of credit going to private enterprises in China has expanded,

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1287 See, for example, Bai, C.E., Hsieh, C.T., Song, Z., *The long shadow of a fiscal expansion*, Brookings, Fall 2016, p. 3; available at: https://www.brookings.edu/wp-content/uploads/2017/02/baitextfall16bpea.pdf (accessed on 30 August 2023).

1288 See, for example, Allen F., Gu, X., *Shadow banking in China compared to other countries*, The Manchester School, Volume 89, Issue 5, 2020, pp. 407-419, arguing that, without sufficient access to capital due to a bias in favour of the state-owned sector, the private sector has turned in recent years to nonbank financial institutions and shadow banking; available at: https://doi.org/10.1111/manc.12331 (accessed on 30 August 2023).

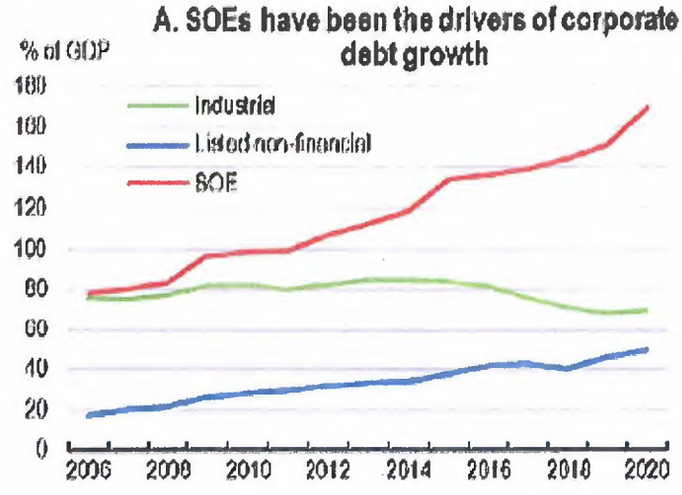
1289 Firth, M., Lin, C., Wong, S., *Leverage and investment under a state-owned bank lending environment: Evidence from China*, Journal of Corporate Finance, Volume 14, Issue 5, December 2008, pp. 642-653; available at: https://doi.org/10.1016/j.jcorpfin.2008.08.002 (accessed on 31 August 2023); Li, K., Yue, H., Zhao, L., *Ownership, institutions and capital structure: Evidence from China*, Journal of Comparative Economics, Volume 37, Issue 3, September 2009, pp. 471-490; available at: https://doi.org/10.1016/j.jce.2009.07.001 (accessed on 31 August 2023); Garcia-Herrero, A., Gavila, S., Santabarbara, D., *What explains the low profitability of Chinese Banks?*, Journal of Banking and Finance, Volume 33, Issue 11, November 2009, pp. 2080-2092; available at: https://doi.org/10.1016/j.jbankfin.2009.05.005 (accessed on 31 August 2023); Poncet, P., Steingress, W., & Vandenbussche, H., *Financial constraints in China: Firm level evidence*, China Economic Review, Volume 21, Issue 3, September 2010, pp. 411-422; available at: https://doi.org/10.1016/j.chieco.2010.03.001 (accessed on 31 August 2023); Guariglia, A., Liu, X., Song, L., *Internal finance and growth: Micro-econometric evidence on Chinese firms*, Journal of Development Economics, Volume 96, Issue 1, September 2011, pp. 79-94; available at: https://doi.org/10.1016/j.jdeveco.2010.07.003 (accessed on 31 August 2023); He, D., Wang, H., *Monetary policy and bank lending in China – evidence from loan level data*, Hong Kong Institute for Monetary Research, Working Paper No.16/2013, October 2013; available at: http://dx.doi.org/10.2139/ssrn.2346181 (accessed on 31 August 2023); Molnar, M., Lu, J., *State-owned firms behind China's corporate debt*, OECD Economics Department Working Papers No. 1536, OECD Publishing, 7 February 2019; available at: https://www.oecd-ilibrary.org/economics/state-owned-firms-behind-china-s-corporate-debt_7c66570e-en (accessed on 31 August 2023).

1290 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 78.

1291 Firth, M., Lin, C., Liu, P., Wong, S., *Inside the black box: Credit allocation in China's private sector*, Journal of Banking and Finance, Volume 33, Issue 6, June 2009, pp. 1144-1155; available at: https://doi.org/10.1016/j.jbankfin.2008.12.008 (accessed on 31 August 2023); Li, H., Meng, L., Wang, Q., Zhou, L., *Political connections, financing and firm performance: Evidence from Chinese firms*, Journal of Development Economics, Volume 87, Issue 2, October 2008, pp. 283-299; available at: https://doi.org/10.1016/j.jdeveco.2007.03.001 (accessed on 31 August 2023); Du, J., Bian, C., Gan, C., *Bank competition, government intervention and SME debt financing*, China Finance Review International, Volume 7, Issue 4, 2017, pp. 478–492; available at: https://www.emerald.com/insight/content/doi/10.1108/CFRI-02-2017-0007/full/pdf (accessed on 31 August 2023).

though a very significant share continued to go to SOEs[1292]. Since 2014, SOEs have continued to be drivers of corporate debt growth as shown in Figure 11.1 below, which charts debt as a percentage of GDP for different entity types. By 2020, SOEs debt had reached approximately 170% of China's GDP, far outstripping debt held by industrial and listed non-financial firms and growing at faster rate. The results of the regulatory push, back in 2017-2018, to decrease the SOEs' level of indebtness – which entailed, inter alia, a requirement that all SOEs cut leverage by 2 percentage points from 2017 levels by the end of 2020 – therefore fell short of expectations, perpetuating the systemic risks related to the leverage of (local) SOEs[1293].

Figure 11.1: Debt as a percentage of GDP, by entity type[1294]



In addition, the IMF has found a negative correlation between firm productivity and leverage ratio as measured by the debt-to-asset ratio (i.e. firms with low revenue productivity have higher leverage ratios), which suggests misallocation of credit across the economy[1295]. The IMF noted that "[t]*his likely reflects the distortions from the implicit guarantees that make SOEs more credit-worthy*'[1296]. Due to implicit state guarantees, the IMF found that banks are more likely to lend to SOEs because they are perceived to be protected from default[1297]. While the role of implicit guarantees cannot be overstated in relation to allocation of credit in favor of SOEs, other factor as play have also been highlighted: "*SOEs face soft budget constraints* [...] [l]*ending to SOEs is therefore seen as entirely safe because the state must support these borrowers regardless of the level of debt they accrue.* [...] *Even if the borrower cannot repay its debt, the state will presumably ensure the company's solvency. Loan officers also face personal incentives for lending to state firms. A loan officer could be personally blamed for*

1292 *People's Republic of China: Selected Issues*, IMF Country Report No. 16/271, IMF, 2016, p.38; available at: https://www.imf.org/external/pubs/ft/scr/2016/cr16271.pdf (accessed 31 August 2023).

1293 See Wright, L. – Grasping Shadows, p. 67-68.

1294 *OECD Economic Surveys: China 2022*, OECD, 2022, p. 79

1295 *People's Republic of China: Selected Issues*, IMF Country Reports 21(12), IMF, 2021, p. 13; available at: https://doi.org/10.5089/9781513566528.002 (accessed on 31 August 2023).

1296 *Ibid.*

1297 *People's Republic of China: Selected Issues*, IMF Country Report No. 19/274, IMF, August 2019, p. 37; available at: https://www.imf.org/en/Publications/CR/Issues/2019/08/15/Peoples-Republic-of-China-Selected-Issues-48593 (accessed on 31 August 2023).

losses incurred by lending to private firms, whereas lending to SOEs would be viewed as a job requirement."[1298]

Given this dynamic, the mechanisms at work in the banking system are not based only on commercial responses. Indeed, SOEs appear to have been repeatedly pressed into boosting investment when the cyclical position of the Chinese economy has weakened. This was most evident during the financial crisis in 2007-2008, and again in early 2016, as can be seen in the sharp increases in state investment in those years[1299]. From 2016 to 2021, the softening of private investment has continued; as a share of total investment, private investment has decreased by 8-9% points to around 56%[1300]. This trend has been exacerbated by the Government's economic response to COVID-19, where SOEs have played a leading role. As noted by the OECD, China's recovery has been '*investment-led*' and "*financed by debt, fuelled by interest subsidies and implicit guarantees for state-owned enterprises (SOEs) and other public entities*"[1301] (see also Section 11.4.1). This manifests in the figures from the first half of 2022, which show stronger fixed-asset investment by SOEs than by private businesses with 9.6% year-over-year growth versus 2.7%[1302] (see further Section 5.2).

It should be noted that China has made some efforts to encourage financing for SMEs, which include many private businesses. The IMF 2023 Article IV report acknowledged the use of credit policies to increase financing for SMEs[1303]. The OECD likewise noted, in March 2022, that SMEs' share in total loans had increased recently[1304]. In particular, the government has put forward three '*not-lower-than*' principles in relation to bank lending to SMEs, whereby the growth rate of SME loans should not be lower than that of total business loans, the number of SMEs receiving loans should not be lower than the number of SMEs receiving loans in the prior year and the percentage of SME loan applications accepted should not be lower than the percentage of SME loan applications accepted in the prior year[1305]. Nonetheless, as shown above, SOEs still dominate, and many SMEs lack access to formal bank loans[1306]. In fact, the IMF maintained its recommendation that China should focus on creating a level playing field

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1298 See Wright, L. – Grasping Shadows, p. 15.

1299 Lardy N. and Solomon M.A., *State Resurgence in China?*, Peterson Institute for International Economics, 7 February 2017, p. 3; available at: https://www.piie.com/sites/default/files/documents/lardy20170207ppt.pdf (accessed on 31 August 2023).

1300 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 50.

1301 *Ibid*, p. 15.

1302 Huang T., Lardy N., *China's private firms are trailing the state-owned sector on several key indicators in 2022*, Peterson Institute for International Economics, 1 September 2022; available at: https://www.piie.com/research/piie-charts/chinas-private-firms-are-trailing-state-owned-sector-several-key-indicators (accessed on 31 August 2023).

1303 See *People's Republic of China: 2022 Article IV Consultation*, IMF Country Report No. 23/67, IMF, 2022, p. 1; available at: https://www.imf.org/-/media/Files/Publications/CR/2023/English/1CHNEA2023001.ashx (accessed on 31 August 2023).

1304 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 30.

1305 *Guiding Opinions of the China Banking Regulatory Commission on the Financial Services for Small and Micro Enterprises in 2015*, CBIRC, 2015; available at: https://www.gov.cn/zhengce/2016-02/18/content_5042979.htm (accessed on 31 August 2023).

1306 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 30; *People's Republic of China: Selected Issues*, IMF Country Reports 21(12), IMF, 2021, p. 13; available at: https://doi.org/10.5089/9781513566528.002 (accessed on 31 August 2023).

for the private sector by giving private players (including foreign firms) equal access to resources such as credit[1307].

11.2.2. Policy-Oriented Sectoral Preferences

Beyond bias toward SOEs, the government also intervenes to direct capital toward strategic sectors. As noted in the IMF 2023 Article IV report, "[c]*redit allocation is becoming less market-determined, as credit policies increasingly use lending targets to support specific sectors*"[1308]. Key planning documents, such as the Made in China 2025 and the 14th FYP (see Chapter 4), identify the encouraged sectors and the government accordingly seeks to direct investment into those sectors by, inter alia, offering loan interest subsidies, loan guarantees and other means of reducing capital costs. For example, Made in China 2025 sets the goal of promoting traditional manufacturing industries to transition towards high-end or high-tech manufacturing, and it identifies loan interest subsidies as a type of financial support to be provided to enterprises. To implement such financial support, China's central ministries and departments have issued a series of documents to guide financial support to the manufacturing industry, including the Several Opinions on Financial Sector's Support for Steady Growth, Structural Adjustment, and Performance Improvement in the Industrial Sector[1309], the Guiding Opinions on Financial Sector's Support for Building A Strong Manufacturing Country[1310], and the Measures on the Administration of the Fund for Industrial Transformation and Upgrading (the Made in China 2025)[1311].

Moreover, banks and other lenders are supposed to support these policies by giving loans to companies active in such sectors[1312]. In this respect, the PBOC meets regularly with large banks to align lending strategies with government objectives and issues industry-specific '*window guidance*' to direct credit[1313]. As explained in Chapter 6, this underlying policy is also visible in various other pieces of legislation at the national level (the Banking Law, the Securities Law or Decision No. 40). Such measures generate a further lending bias.

11.2.3. Other Capital Market Interventions

1307 "*Reforms securing competitive neutrality between SOEs and privately owned firms have been lacking*". See *People's Republic of China: 2022 Article IV Consultation*, IMF Country Report No. 23/67, IMF, 2022, p. 1; available at: https://www.imf.org/-/media/Files/Publications/CR/2023/English/1CHNEA2023001.ashx (accessed on 31 August 2023).

1308 *Ibid*, p. 5.

1309 Article 1.2 of the *Several Opinions on Financial Sector's Support for Steady Growth, Structural Adjustment, and Performance Improvement in the Industrial Sector*, PBOC, 2016; available at: http://www.gov.cn/xinwen/2016-02/16/content_5041671.htm (accessed on 31 August 2023).

1310 Available at: https://www.gov.cn/xinwen/2017-03/30/content_5181983.htm (accessed on 31 August 2023).

1311 Available at: http://xjq.nc.gov.cn/xjqrmzf/xjbmgfxwj17/201911/5a5f1c981bdb43d2ab5cc8af4018b663.shtml (accessed on 31 August 2023).

1312 *Ibid*.

1313 Shevlin, A., Wu, L., *China: The path to interest rate liberalization*, J.P. Morgan Asset Management, July 2015, p. 7; available at: http://cdn.haymarketmedia.asia/corporate-treasurer%2Fcontent%2FWP_GL_China_Interest_Rate_Liberalization_r21.pdf (accessed on 31 August 2023); PRC Macro. (2016). *Bailing China in to the great state refinancing*, p. 31.

Finally, as explained in Sections 6.4.2. and 6.4.3, state intervention and restrictions on access to capital not only extend to bank loans, but also to the Chinese bond market and stock market. Concerning the bond market, Section 6.4.2 explained that access to the market is tightly regulated by governmental institutions, and the major players in the market are mainly state-owned entities.

Concerning the stock market, Section 6.4.3 explained that access to Chinese stock exchanges is heavily regulated by the state and that many of the firms listed on the stock exchanges are state-owned. In addition, there are restrictions on a substantial number of shares issued (since they are either non-tradable or not accessible to foreign investors).

As a result, neither bond nor stock markets in China have been effectively allocating resources in the economy. Their functioning should rather be seen as an extension of the loan/capital bias of the banking market to other areas of the formal financial system.

11.3. COST OF CAPITAL

Historically, China maintained caps on loan rates and deposit rates in order to guarantee interest margins for banks and limit competition for both loans and deposits. This had the effect of eroding the relationship between risk and return, which is key to commercial banking, capital market development, and access to finance[1314]. However, caps on loan rates were finally abolished in 2013, while caps on deposit rates were abolished in October 2015.

China has more recently continued the process of interest rate liberalisation. In August 2019, the PBOC introduced the loan prime rate ('*LPR*'), which is linked to rates set during open market operations (the PBOC's medium-term lending facility)[1315]. The LPR is published monthly and is the '*yardstick*' for new corporate loan pricing[1316].

While credit pricing better reflects funding conditions, interest rates have been guided downward in response to COVID-19 and the share of loans at or below the benchmark has increased[1317]. In August 2019, 16% of loans were made below the benchmark, whereas by September 2022 this had grown to 34%[1318]. This trend, through September 2021, is reflected in Figure 11.2 below which shows at left the downward trend line of the one-year LPR and at right in blue the upward trend line of the percentage of loans made below the LPR.

1314 *China 2030: Building a modern, harmonious, and creative society*, The World Bank and Development Research Centre of the State Council of the People's Republic of China, 2013, p. 119; available at: https://documents1.worldbank.org/curated/en/781101468239669951/pdf/China-2030-building-a-modern-harmonious-and-creative-society.pdf (accessed on 31 August 2023).

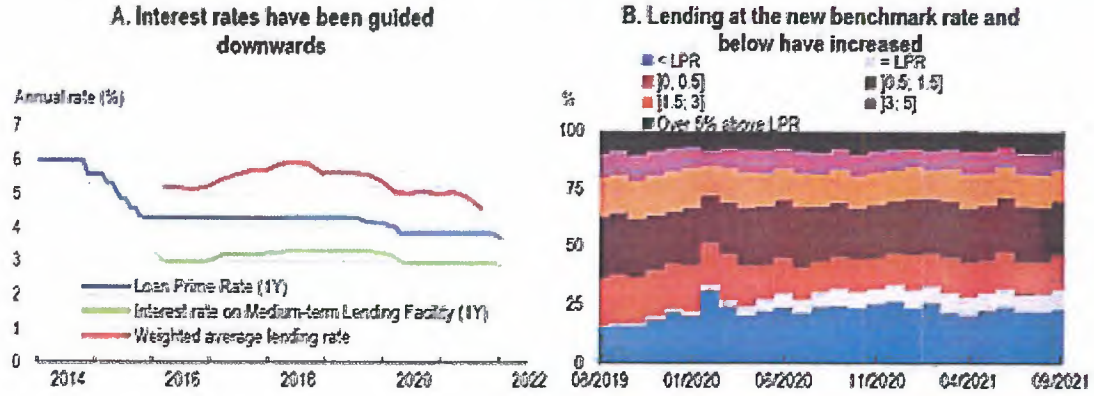
1315 *Announcement No. 15 [2019] of the People's Bank of China*; available at: https://www.gov.cn/xinwen/2019-08/18/content_5422048.htm (accessed on 31 August 2023). See also *Announcement of the People's Bank of China on LPR Formation Mechanism*; available at: http://www.pbc.gov.cn/en/3688229/3688335/3883798/19e15ae1/index4.html (accessed on 31 August 2023).

1316 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 28.

1317 *Ibid.*

1318 *China interval ratio of lending rate: Below LPR*, CEIC Data 2019-2023; available at: https://www.ceicdata.com/en/china/rediscount-and-lending-rate/cn-interval-ratio-of-lending-rate-below-lpr (accessed on 31 August 2023).

Figure 11.2: Trends in LPR and lending rates[1319]



There remain some other distinctive features. In particular, China has made use of selective liquidity support. This influences both the pattern and level of lending rates to specific sectors. For example, in April 2022, the PBOC established a scientific and technological relending facility of up to RMB 200 billion[1320]. According to the OECD, the facility is available to 21 financial institutions, has an interest rate of only 1.75%, and provides financial support up to 60% of the principal amount of loans to scientific and technological enterprises[1321].

Beyond measures to explicitly reduce the cost of capital, implicit measures also play a role in artificially reducing borrowing costs. The IMF 2023 Article IV report found that '*implicit guarantees*' effectively translated into a 4-5 notch upgrade in credit ratings, which in turn lowered borrowing costs by 1-2% points[1322]. In 2016, the IMF put the effect slightly lower, at 2-3 credit notches and 0.5-1% interest rate advantage for enterprises with an implicit guarantee[1323]. These figures apply to the Chinese economy in general and not to specific enterprises. In comparison, findings made in various EU trade defence investigations suggest that the upgrade in credit ratings and the corresponding savings in borrowing costs are much higher in certain industrial sectors and for specific companies[1324].

In addition, several EU anti-subsidy investigations over the past years have concluded that loans had been provided to Chinese companies under investigation below normal commercial market

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1319 *OECD Economic Surveys: China 2022*, OECD, 2022, p. 29.

1320 Press release of the People's Bank of China, 28 April 2022; available at: http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/4541178/index.html (accessed on 31 August 2023).

1321 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 71.

1322 *People's Republic of China: Selected Issues*, IMF Country Report No. 16/271, IMF, 2016, p.38; available at: https://www.imf.org/external/pubs/ft/scr/2016/cr16271.pdf (accessed 31 August 2023).

1323 Maliszewski, W. et al., *Resolving China's corporate debt problem*, IMF Working Paper WP/16/203, October 2016; available at: https://www.imf.org/external/pubs/ft/wp/2016/wp16203.pdf (accessed on 31 August 2023).

1324 See, amongst others, Commission Implementing Regulation (EU) 2017/969 (OJ L 146, 8.6.2017, p. 17) (*Hot rolled flat steel products*); Council Implementing Regulation (EU) No 452/2011 (OJ L 128, 14.5.2011, p. 18) (*Coated fine paper*); Council Implementing Regulation (EU) No 215/2013 (OJ L 73, 15.3.2013, p. 16) (*Organic coated steel);* Commission Implementing Regulation (EU) 2017/366 (OJ L 56, 3.3.2017, p. 1) (*Solar panels*); Commission Implementing Regulation (EU) No 1379/2014 (OJ L 367, 23.12.2014, p. 22) (*Filament glass fibre*); Commission Implementing Decision 2014/918/EU (OJ L 360, 17.12.2014, p. 65) (*Polyester Staple Fibers*).

rates regardless of the companies' financial and credit risk situation[1325]. Each of these investigations concerned products or sectors that were considered to be '*key*' or '*encouraged*' areas by the Government.

11.4. HANDLING OF DEBT-AT-RISK

Beyond the price charged for new loans discussed in the prior section, actual interest costs also depend on how the existing stock of loans is turned over. For existing loans on the books there may be an incentive for banks to defer or lower interest rates charged to increase viability and reduce write-offs (*'evergreening'*). The counterpart is a high level of estimated non-performing loans (*'NPLs'*). Such practices will be further discussed in this section.

11.4.1. SYSTEMIC ISSUES RELATED TO CORPORATE DEBT

China's economic growth became increasingly credit-intensive after the 2008-2009 financial crisis, to which China responded with a large stimulus package to meet the country's economic growth target, sourced largely through local government and SOEs, with financing provided by a large credit expansion by the banking system. Despite the '*deleveraging campaign*' in 2017 and 2018 (see Section 6.3.1.5), the trend of credit expansion resumed in 2019 and exploded in 2020 due to the economic response to COVID-19[1326].

As a result, according to data from the Bank of International Settlements, by the end of 2021 China's non-financial sector debt had reached nearly 290% of GDP, far above the average for emerging markets[1327]. This rise in leverage has been very abrupt, since the debt-to-GDP ratio only stood at 141.3% at the end of 2008. Corporate sector debt, which accounts for the largest segment, was equivalent to approximately 153% of GDP at the end of 2021[1328]. For the period from June 2000 until May 2023, China's credit growth averaged around 15.4% per year, with a high of 33.4% year-on-year growth in November 2009 and a low of 7.8% year-on-year growth in May 2005[1329]. In May 2023, China's year-on-year credit growth stood at 10.7%[1330].

This growth of credit has raised systemic risks. Following the global financial crisis, a pattern has become embedded in the Chinese economic structure: investment by local government and SOEs is used to boost demand when the economy falters, so as to keep pace with annual growth targets. Despite regulatory efforts to address the systemic risks in the financial sector (see in

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1325 *Ibid.*

1326 Clark, H., Dawson, J., *Is China running out of policy space to navigate future economic challenges?*, Federal Reserve Bank of New York, 26 September 2022; available at: https://libertystreeteconomics.newyorkfed.org/2022/09/is-china-running-out-of-policy-space-to-navigate-future-economic-challenges/ (accessed on 31 August 2023). See also *OECD Economic Surveys: China 2022*, OECD, 2022, p. 28: '*All these measures were effective to entice banks to lend, as illustrated by robust credit growth shortly after the outbreak, which resulted in soaring corporate debt*'.

1327 *Ibid.* See further *Chinese debt-to-GDP ratio approaches 300%*, The Bank of Finland, Institute for Emerging Economies, 29 January 2021; available at: https://www.bofit.fi/en/monitoring/weekly/2021/vw202104_3/ (accessed on 31 August 2023).

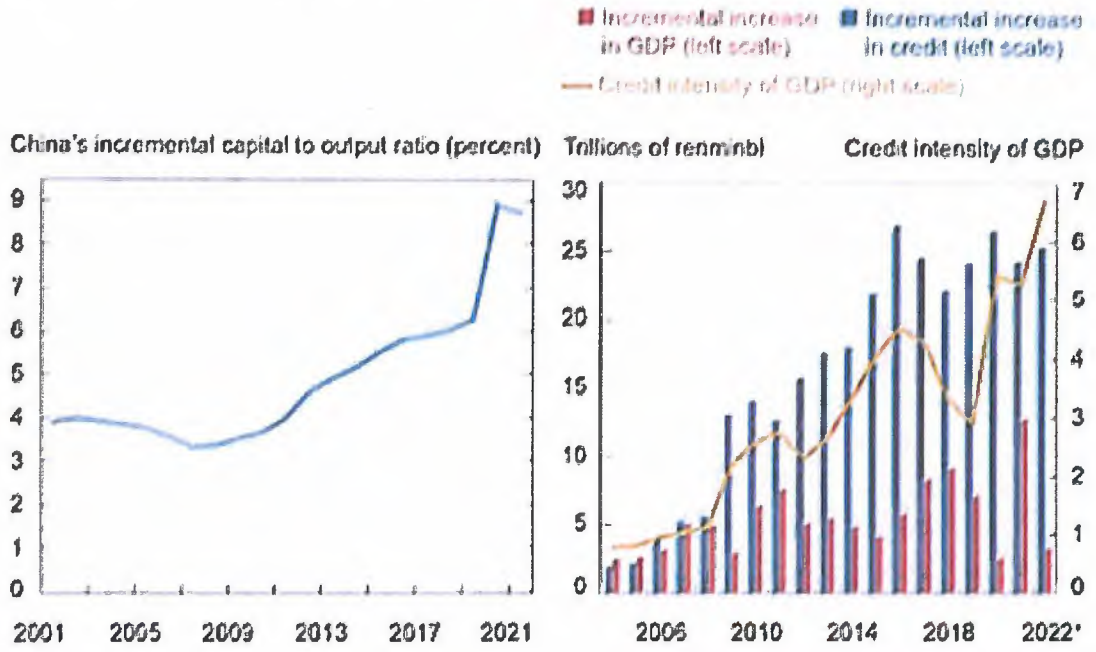
1328 Clark, H., Dawson, J., *Is China running out of policy space to navigate future economic challenges?*, Federal Reserve Bank of New York, 26 September 2022; available at: https://libertystreeteconomics.newyorkfed.org/2022/09/is-china-running-out-of-policy-space-to-navigate-future-economic-challenges/ (accessed on 31 August 2023).

1329 *China domestic credit growth*, CEIC Data 2000-2023; available at: https://www.ceicdata.com/en/indicator/china/domestic-credit-growth (accessed on 31 August 2023).

1330 *Ibid.*

particular Section 6.3.1.5), the economy has been locked in a fundamentally unsustainable dynamics: slowing the growth of credit would risk sharply reducing activity and profits in several sectors. The credit-based stimulus policy has thus led to excessive use of debt. This contributed to massive overinvestment in capital intensive industries, which in turn caused the formation of overcapacities[1331]. At the same time, corporate profits have been deteriorating. As an increasing amount of capital was invested in projects with lower returns on investment, the quality of bank assets declined, and debt-at-risk increased[1332]. As a result, the incremental capital-to-output ratio and the credit intensity of growth have steadily increased (see Figure 11.3 below).

Figure 11.3: Incremental capital-to-output ratio and credit intensity[1333]



This is most visible in the sectors of the economy that were most involved in stimulus spending, i.e. local governments that were pushed by the central authorities to provide the bulk of the support to industry and industries with overcapacities, as will be described in greater detail below.

1331 *Overcapacity in China: An impediment to the Party's reform agenda*, EUCCC, 2016, p. 8; available at: https://www.europeanchamber.com.cn/en/publications-overcapacity-in-china (accessed on 31 August 2023).

1332 Maliszewski, W. et al., Resolving China's corporate debt problem, IMF Working Paper WP/16/203, October 2016, pp. 3-4; available at: https://www.imf.org/external/pubs/ft/wp/2016/wp16203.pdf (accessed on 31 August 2023). See also *China's supply-side structural reforms: Progress and outlook*, The Economist Intelligence Unit, 2017, p. 3; available at: http://www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=China_SSSR_EN.pdf&mode=wp&campaignid=ChinaSSSR2017 (accessed on 31 August 2023).

1333 Clark, H., Dawson, J., *Is China running out of policy space to navigate future economic challenges?*, Federal Reserve Bank of New York, 26 September 2022; available at: https://libertystreeteconomics.newyorkfed.org/2022/09/is-china-running-out-of-policy-space-to-navigate-future-economic-challenges/ (accessed on 31 August 2023).

11.4.2. THE ROLE OF LOCAL GOVERNMENTS IN THE DEBT CRISIS

Following the global financial crisis in 2008, local governments undertook major spending projects to keep economic growth on track and much of this was financed through so-called local government financing vehicles ('*LGFVs*')[1334], state-owned companies that raise funds for local governments[1335]. Many of the local level SOEs are LGFVs[1336]. These entities may assume various names, such as corporations for city construction investment, city asset investment or urban development investment[1337]. The local government is the sole or dominant shareholder in the LGFV, which raises capital to finance the local government's investment projects.

A typical arrangement is that the local government transfers ownership of land to the local financing vehicle, and the land is used as collateral to borrow from banks' WMP, trusts or the bond market. In addition to the land use rights, the local government can also use other collateral in exchange for equity ownership, such as highways or bridges and general budget revenues[1338]. The local government directly or indirectly shares the debt servicing responsibilities, and sometimes subsidises the losses of LGFVs[1339].

In this context, it is important to note that there is a mismatch in provincial finances between centralised revenue generation and local spending responsibilities[1340]. In fact, local

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1334 Bai, C.E., Hsieh, C.T., Song, Z., *The long shadow of a fiscal expansion*, Brookings, Fall 2016, pp. 1-2; available at: https://www.brookings.edu/wp-content/uploads/2017/02/baitextfall16bpea.pdf (accessed on 30 August 2023).

1335 Zhang, M., *China's local government financing vehicles (LGFV): 7 things you should know about China's local debt bomb, 27 September 2013*; available at: http://www.ibtimes.com/chinas-local-government-financing-vehicles-lgfv-7-things-you-should-know-about-chinas-1411694 (accessed on 4 September 2023).

1336 Batson, A., *Fixing China's state sector*, Paulson Policy Memorandum, Paulson Institute, January 2014, p. 12; available at: http://www.paulsoninstitute.org/wp-content/uploads/2017/01/fixingchina_sstatesector_english_R.pdf (accessed on 4 September 2023).

1337 Hou, Y., *Interpreting China's fiscal reforms and the 13th Five-Year Plan targets*, Maxwell School, Syracuse University, 27 April 2016, p. 9; available at: https://www.uscc.gov/sites/default/files/Yilin%20Hou_Written%20Testimony%20042716.pdf (accessed on 4 September 2023).

1338 Ambrose, B.W., Dong, Y., Wu., J., *Understanding the risk of China's local government debts and its linkage with property markets*, 14 March 2016, p. 14.; available at: https://www1.villanova.edu/content/dam/villanova/VSB/assets/Understanding%20the%20Risk%20of%20China's%20Local%20Government%20Debts%20and%20Its%20Linkage%20with%20Property%20Markets.pdf (accessed on 4 September 2023); Bai, C.E., Hsieh, C.T., Song, Z., *The long shadow of a fiscal expansion.* Brookings, Fall 2016, pp. 1, 6, 8–10; available at: https://www.brookings.edu/wp-content/uploads/2017/02/baitextfall16bpea.pdf (accessed on 30 August 2023); Dorrucci, E., Pula, G., Santabarbara, D., *China's Economic Growth and Rebalancing*, European Central Bank, Occasional Paper Series No. 142, February 2013; available at: https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp142.pdf (accessed on 4 September 2023); Clarke, D., Lu, F., *The law of China's local government debt crisis: Local government financing vehicles and their bonds*, George Washington University Law School, 2016; available at: https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=2472&context=faculty_publications (accessed on 4 September 2023); *The debt dragon: Credit habit proves hard for China to kick*, Financial Times. 26 August 2013; available at: https://www.ft.com/content/f43a4dda-08f2-11e3-ad07-00144feabdc0 (accessed on 4 September 2023).

1339 Zhang, Y.S., Barnett, S., *Fiscal vulnerabilities and risks from local government finance in China*, IMF Working Paper WP/14/4, January 2014, p. 4; available at: https://www.imf.org/external/pubs/ft/wp/2014/wp1404.pdf (accessed on 4 September 2023).

1340 Deutsche Bank: China's provinces, research briefing, 11 June 2015, pp. 1, 7–9.

governments account for around 86% of total budgetary expenditures; however, they receive only around 53% of tax revenues as returns from the central government[1341]. In short, fiscal revenue is mostly collected by the central government but mostly spent at the local level[1342].

The higher degree of decentralisation of expenditure responsibilities relative to revenues has led to financing gaps at the sub-national level that are only partially filled by fiscal transfers[1343].

In addition, on-budget borrowing by local governments is limited and tightly regulated by the central government. However, LGFV debt does not show up on the government's balance sheet, and therefore local governments are free to raise funds without violating the budget law[1344]. For example, debts incurred to finance urban construction projects are often classified as SOE debt and do not show up in the budget[1345]. Local governments therefore rely extensively on such off-budget mechanisms to finance priority spending, in particular infrastructure investment[1346].

Finally, investments are important for local officials because companies boost employment in the region and improve tax revenues in the medium term. Traditionally, an official's career development was determined by positive local GDP growth data, industrial production and visible physical changes in cities. To attract investments, it is therefore common for local officials to give implicit lending guarantees to companies. The 2008 stimulus package, which presented local governments with huge amounts of money in early 2009, worsened this trend at the local level[1347]. This has again occurred in connection with the COVID-19 stimulus, which drove significant funds toward infrastructure investment[1348].

As a result, local government debt ballooned in the aftermath of the 2008 financial crisis and again in response to COVID-19. Various estimates of local government debt exist, which are

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1341 See China Power. *Making sense of China's government budget.* https://chinapower.csis.org/making-sense-of-chinas-government-budget/ (accessed on 13 June 2023) and statistics from National Bureau of Statistics of China. *National Government Revenue and Expenditure.* https://data.stats.gov.cn/english/tablequery.htm?code=AC07 (accessed on 13 June 2023).

1342 *OECD Economic Surveys: China 2017*, OECD, 2017, pp. 29-30; Hou, Y., *Interpreting China's fiscal reforms and the 13th Five-Year Plan targets*, Maxwell School, Syracuse University, 27 April 2016, p. 3; available at: https://www.uscc.gov/sites/default/files/Yilin%20Hou_Written%20Testimony%20042716.pdf (accessed on 4 September 2023).

1343 *OECD Economic Surveys 2017*, OECD, 2017, pp. 29-30.

1344 Bai, C.E., Hsieh, C.T., Song, Z., *The long shadow of a fiscal expansion*, Brookings, Fall 2016, pp. 1, 6, 8–10; available at: https://www.brookings.edu/wp-content/uploads/2017/02/baitextfall16bpea.pdf (accessed on 30 August 2023); Dorrucci, E., Pula, G., Santabarbara, D., *China's Economic Growth and Rebalancing*, European Central Bank, Occasional Paper Series No. 142, February 2013; available at: https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp142.pdf (accessed on 4 September 2023); Clarke, D., Lu, F., *The law of China's local government debt crisis: Local government financing vehicles and their bonds*, George Washington University Law School, 2016; available at: https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=2472&context=faculty_publications (accessed on 4 September 2023).

1345 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 39.

1346 Zhang, Y.S., Barnett, S., *Fiscal vulnerabilities and risks from local government finance in China*, IMF Working Paper WP/14/4, January 2014, pp. 5, 13; available at: https://www.imf.org/external/pubs/ft/wp/2014/wp1404.pdf (accessed on 4 September 2023).

1347 *Overcapacity in China: An impediment to the Party's reform agenda*, EUCCC, 2016, p. 10; available at: https://www.europeanchamber.com.cn/en/publications-overcapacity-in-china (accessed on 31 August 2023).

1348 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 15.

not directly comparable. Official Chinese figures include '*on budget*' debt (i.e. local government bonds and explicit debt), whereas the IMF also calculates '*augmented*' debt that further captures additional LGFV debt that is assumed likely to be recognised as general government debt[1349]. According to the IMF, official local government debt jumped from RMB 16,5 trillion (20% of GDP) in 2017 to RMB 30,5 trillion (27% of GDP) in 2021. This does not include the additional LGFV debt, which itself jumped from RMB 30,7 trillion (37% of GDP) in 2017 to RMB 50,1 trillion (44% of GDP) in 2021[1350]. Notably, the LGFV debt is significantly greater than the official, '*on budget*' debt.

The government has made some recent efforts to rein in LGFV indebtedness. In addition to the regulatory measures introduced in 2017-2018 (see Section 6.3.1.5), in July 2021, CBIRC issued guidelines that forbid banks from *(i)* extending new working capital loans to LGFVs that carry legacy government debt, *(ii)* funding LGFV projects that rely on fiscal subsidies alone for debt servicing, and *(iii)* funding enterprises that use expected land transfer income as the source of debt repayment[1351]. Nonetheless, the mushrooming debt has sparked fears of LGFV defaults; in fact, according to the IMF, LGFV debt-at-risk is equivalent to about 37% of GDP and contributes to China's elevated debt vulnerabilities[1352].

As such, LGFV activities have contributed to the systemic risks in the financial sector, such as the excessive use of leverage, the overinvestment in capital intensive industries, and the increasingly inefficient allocation of credit already described above.

11.4.3. Non-Performing Loans

In view of the situation described above, it may be surprising to see that according to official CBIRC figures, only 1.9% of outstanding loans are qualified as NPLs, as shown in Table 11.1 below.

Table 11.1: Official CBIRC estimates of NPLs[1353]

	2015	2016	2017	2018	2019	2020
NPLs (RMB 100 million)	19 624	21 935	23 892	28 426	31 924	34 740
NPLs (%)	1.9	1.9	1.9	2.0	2.0	1.9
Substandard loan (%)	1.0	0.8	0.8	0.8	0.9	0.9

1349 See *People's Republic of China: 2022 Article IV Consultation*, IMF Country Report No. 23/67, IMF, 2022, p. 44, 54; available at: https://www.imf.org/-/media/Files/Publications/CR/2023/English/1CHNEA2023001.ashx (accessed on 31 August 2023).

1350 *Ibid*, p. 44.

1351 *Guiding Opinions for Banding and Insurance Institutions to Further Improve the Prevention and Resolution of Hidden Debt of Local Governments*, Document 2021/15, CBIRC, 2021.

1352 Hoyle, H., Jaesakul, P., *Local government financing vehicles revisited*, IMF, p. 41.; available at: https://www.elibrary.imf.org/downloadpdf/journals/002/2022/022/article-A003-en.xml (accessed on 4 September 2023).

1353 *Statistics – Achievements During the 13th FYP Period*, CBIRC, 2021; available at: http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=970583&itemId=954&generaltype=0 (accessed on 4 September 2023).

Doubtful loan (%)	0.8	0.8	0.8	0.8	0.8	0.7
Loss loan (%)	0.2	0.3	0.3	0.3	0.3	0.3

However, official data on NPLs are unreliable because the classification of loans does not follow international standards, and a significant amount of credit risk is not reflected on bank balance sheets because it has been moved off balance sheet through the use of asset management companies ('*AMCs*').

In principle, China follows the international five category system that classifies loans into categories of '*pass*', '*special mention*', '*substandard*', '*doubtful*' and '*loss*'. The last three categories are scored as NPLs. While the CBIRC and PBOC jointly formulated rules on risk classification of commercial bank credit facilities in 2023 to better align with international standards[1354], China does not yet fully follow international norms. Official NPL classification suffers from several weaknesses:

- the Basel Committee for Bank Supervision classifies a loan as '*doubtful*' when any interest payment is overdue by 180 days or more (90 in the US), while in China this step is only taken when (i) a principal payment is overdue by 270 days or more, (ii) the debtor is evading it debts owed to banks, or (iii) there is credit impairment of the financial assets and the expected credit loss accounts for more than 50% of the book value thereof[1355];
- due to debt moratoria for debtors affected by COVID-19, potential bad loans are not yet classified as such as of writing of this Report and will likely boost the share of bad loans in the future[1356];
- as noted above, a substantial amount of loan risk has been moved off balance sheet, as banks write off bad loans and transfer them to AMCs on a '*massive*' scale[1357].

The situation also varies by sector, with certain sectors plagued by overcapacity issues and higher shares of NPLs. A 2016 UBS study found, for example, that in six overcapacity sectors – coal, metal smelting, cement, glass, aluminium and ship building – earnings before interest and tax are not enough to cover interest payments for about 25-30% of the total number of companies in these six sectors[1358]. The study identified various resolution scenarios and concluded that in the '*more likely*' scenario, some USD 1-1.5 trillion of additional NPLs would need to be written off by banks. Similar concerns have played out more recently in the real estate sector. The sector has been characterised by particularly high leverage, with listed

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1354 Order No. 1 [2023] of CBIRC and PBOC, *Rules on Risk Classification of Financial Assets of Commercial Banks*, issued on 10 February 2023, effective from 1 July 2023; available at: https://www.gov.cn/zhengce/2023-02/11/content_5750184.htm (accessed on 4 September 2023), English version available at: http://www.pbc.gov.cn/en/3688253/3689009/4180845/4835368/2023033016333840569.pdf (accessed on 4 September 2023).

1355 *Ibid*, Article 12.

1356 *OECD Economic Surveys: China 2022,* OECD, 2022, p. 32.

1357 *Ibid.*

1358 *China economic perspectives – The economic and financial impacts of excess capacity reduction*, UBS, 2016.

companies having an average debt-to-asset ratio in 2020 of approximately 80%[1359]. Tightening credit conditions and the turmoil caused by COVID-19 led to a surge of defaults and bankruptcy filings in early 2020 and defaults by some of the major players in 2021[1360] (see Section 6.4.2.2). This led S&P Global Ratings to warn, in December 2021, that NPL ratios for property loans could rise from 2% at the end of 2020 to 5.5% at the end of 2021[1361]. Notably, banks have been allowed to ease NPL classification rules for loans to sectors impacted by the real estate crisis and the COVID-19 pandemic more generally[1362].

11.4.4. Government Response to Debt-at-Risk

11.4.4.1. Evergreening of Loans

Until recently, the first reaction of the Government and financial institutions to increasing bad debt problems was to '*weather it out*' by rolling over debt and providing bailouts or debt restructuring to avoid defaults. This led to an abundance of so-called zombie companies (see Section 5.4), i.e. companies making losses or unable to service their interest payment obligations but still able to obtain loans. In this regard, China has demonstrated a degree of progress. According to SASAC, China implemented a three-year plan to clean up the issue of zombie companies by 2020[1363]. Nonetheless, Chinese banks continue to demonstrate a propensity to '*evergreen*' corporate debt. In 2022, Zhongtai Securities analysed the continued extent of this practice by tracking volumes of loans with deferred repayment in China's commercial banks. As shown in Figure 11.4 below, evergreening remains an issue and has in fact increased in scale.

1359 *China listed company: debt to asset ratio: real estate 2001-2020*, CEIC Data; available at: https://www.ceicdata.com/en/china/financial-data-of-listed-company-debt-to-asset-ratio/cn-listed-company-debt-to-asset-ratio-real-estate (accessed on 4 September 2023).

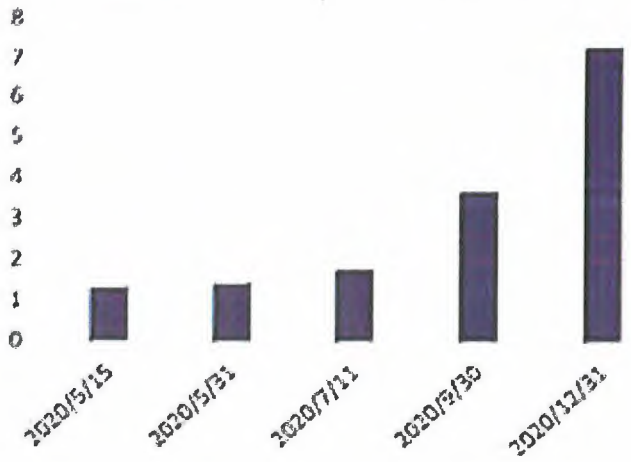
1360 See *OECD Economic Surveys: China 2022,* OECD, 2022, p. 35.

1361 *Chinese banks to see doubling of bad property loan ratio, warns S&P*, Reuters, 15 December 2021; available at: https://www.reuters.com/markets/rates-bonds/chinese-banks-see-doubling-bad-property-loan-ratio-warns-sp-2021-12-15/ (accessed on 4 September 2023).

1362 *People's Republic of China: 2022 Article IV Consultation*, IMF Country Report No. 23/67, IMF, 2022, p. 10; available at: https://www.imf.org/-/media/Files/Publications/CR/2023/English/1CHNEA2023001.ashx (accessed on 31 August 2023).

1363 *Ibid*, p. 49. Though there is some concern that China's response to COVID-19 may result in the reemergence of zombie companies as a major concern. See, for example, Huang, T., *As China recovers from the pandemic, will zombie firms return?*, Peterson Institute for International Economics, 21 October 2020; available at: https://www.piie.com/blogs/china-economic-watch/china-recovers-pandemic-will-zombie-firms-return (accessed on 4 September 2023).

Figure 11.4: Total Evergreen Loans Provided by Banks in China (in 100 million RMB)[1364]



In the aggregate, PBOC statistics show that in 2020 Chinese banks made evergreen loans of RMB 7,3 trillion in total[1365]. Data from S&P Global shows that evergreening of debt amounted to 3,5% of corporate credit by the end of 2020 (RMB 6,6 trillion)[1366].

The existence of evergreening practices was confirmed by circulars issued in November 2022 by the PBOC, CBIRC and other ministries. These circulars explicitly encouraged financial institutions to support deferred repayment of principal and interest of loans to micro and small businesses, as well as to support reasonable extensions of development loans and credit loans to real estate enterprises[1367].

11.4.4.2. TRANSFER OF DEBT OWNERSHIP

In response to the Asian financial crisis in the late 1990s, the government dealt with NPLs by injecting fresh state capital into the then '*Big Four*' banks (see Section 6.3.1.1) and by establishing four AMCs, i.e. a '*bad bank*' for each of the Big Four. These AMCs purchased NPLs from the banks and then slowly sold them off to recover part of the losses. Such an

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1364 *Securities research report - Tracking and envisioning banks' policies on deferred repayment of principal and interest: Scale and impact on income and asset quality*, Zhongtai Securities, 29 May 2022; available at: https://pdf.dfcfw.com/pdf/H3_AP202205301568848350_1.pdf?1653923381000.pdf (accessed on 4 September 2023).

1365 PBOC press release of 15 January 2021; available at: https://www.gov.cn/xinwen/2021-01/15/content_5580268.htm (accessed on 4 September 2023).

1366 Rong, M., *China's policy on delaying repayment of principal and interest has been renewed three times to mitigate non-performing risks, but small and medium-sized banks are still under pressure*, Reuters, 13 April 2021; available at: https://www.reuters.com/article/china-covid-aid-loan-bank-npl-0413-idCNKBS2C00XN (accessed on 4 September 2023).

1367 Circular [2022] 252 of the PBOC, CBIRC, MOF, NDRC, MIIT and SAMR on Further Increasing Support for Deferred Repayment of Principal and Interest of Loans to Micro and Small Businesses, issued on 8 November 2022; available at: https://www.gov.cn/zhengce/zhengceku/2022-11/14/content_5726949.htm (accessed on 4 September 2023); Circular [2022] 254 of the PBOC and CBIRC on Effectively Carrying out the Existing Work on Providing Financial Support for the Stable and Healthy Development of Real Estate Sector, issued on 11 November 2022; available at: http://www.pbc.gov.cn/zhengwugongkai/4081330/4406346/4693549/4720053/index.html (accessed on 4 September 2023).

approach helped to avoid a banking crisis, but – in itself – did nothing to resolve the underlying corporate governance and misallocation problems.

The current approach of the Government to the rising credit crisis consists of a mix of policies, which should be considered in the context of the broader policies on SSSR (see Section 5.4), which were first set out in December 2015, focusing on five areas to reduce structural imbalances and financial risks in the Chinese economy. One of these five focal points is corporate deleveraging, i.e. reducing debt ratios in the corporate sector[1368]. As part of the corporate deleveraging exercise, the Opinions on Actively and Steadily Lowering Enterprise Leverage Ratio were issued by the State Council in September 2016[1369]. This document follows the underlying principles similar to the previous AMC approach, as it addresses excessive corporate leverage mainly by transferring ownership of the debt through mergers and acquisitions (*'M&A'*) and debt-for-equity swaps, without solving the underlying problems of the distressed companies.

This approach is still evident in a circular issued in 2019 by the NDRC, PBOC, MOF and CBIRC, which sets key tasks for reducing leverage ratios and promotes debt-for-equity swaps and other measures, including M&A[1370].

11.4.4.2.1. Mergers and Acquisitions

The Government promotes business consolidation and debt restructuring in order to reduce financial risks. For example, the 2016 Guiding Opinions (see Section 5.4) clarified central SOEs' strategic position and aimed to form a group of innovative and internationally competitive firms, with consolidation expected to drive efficiency gains and to lower financial risks. Such consolidation has in fact played out. According to SASAC, the total number of central SOEs has been reduced from 117 in 2012 to 97 via M&A[1371] (see Section 5.2).

Several other regulatory documents corroborate this assessment, as they promote M&A in various ways. For example, the above-mentioned Opinions on Actively and Steadily Lowering Enterprise Leverage Ratio explicitly encourage M&A as a means of corporate deleveraging. In this document, the State Council calls for reinforced efforts to conduct M&A for enterprises in industrial overcapacity sectors, eliminating zombie companies and ineffective ones. It also pledges to strengthen financial support through measures such as granting M&A loans and

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1368 *China's supply-side structural reforms: Progress and outlook*, The Economist Intelligence Unit, 2017, p. 3; available at: http://www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=China_SSSR_EN.pdf&mode=wp&campaignid=ChinaSSSR2017 (accessed on 31 August 2023).

1369 *Opinions of the State Council on Actively and Steadily Lowering Enterprise Leverage Ratio*, Document 2016/54, State Council, 22 September 2016; available at: https://www.gov.cn/gongbao/content/2016/content_5124355.htm (accessed on 4 September 2023).

1370 Circular [2019] 1276 of the NDRC, PBOC, MOF, CBIRC on Issuing the 2019 Key Tasks for Reducing the Leverage Ratio of Enterprises, 2019; available at: https://www.gov.cn/zhengce/zhengceku/2019-12/03/content_5458022.htm (accessed on 4 September 2023).

1371 China Daily indicated 98 as the total number of central SOEs in 2023, see *SOEs' restructuring set to advance*, China Daily, 28 February 2023; available at: https://www.chinadaily.com.cn/a/202302/28/WS63fd600ea31057c47ebb13bb.html (accessed on 4 September 2023).

encouraging qualified enterprises to raise funds for M&A through issuing preference shares and convertible bonds[1372].

Furthermore, at the level of industrial sectors, the 2016 Several Opinions on the Issues of Financial Claims and Liabilities Involved in Resolving Overcapacity of the Iron and Steel Industry and the Coal Industry state that: *"Financial support shall be stepped up for iron and steel enterprises and coal enterprises that engage in merger and reorganization"*[1373].

Similarly, the Guidelines of the PBOC, CBRC, CSRC, and CIRC on Supporting the Steel and Coal Industries to Resolve Overcapacity and Achieve Turnaround in Development state that it is necessary to "*improve the M&A loan business, and expand the scale of M&A loans, reasonably determine the loan term and interest rate, so as to support enterprises and regions with comparative advantage to integrate the industrial capacity*"[1374].

The PBOC and CBIRC have also recently announced financial support policies for the real estate industry to this end. For example, commercial banks are encouraged to issue M&A loans for real estate projects in a steady and orderly manner and to support high-quality real estate enterprises in acquiring projects of distressed real estate enterprises. In addition, PBOC and CBIRC would support eligible commercial banks and AMCs to issue bonds involving real estate M&A[1375].

One example of state-led corporate restructuring is Brilliance Automobile, which defaulted on its debt in 2020[1376]. The Shenyang government led the subsequent restructuring efforts[1377]. In May 2023, Brilliance Automobile publicly filed with the HKSE that its restructuring committee had selected Shenyang Automobile Co., Ltd., ultimately controlled by the Shenyang Municipal

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1372 *Opinions of the State Council on Actively and Steadily Lowering Enterprise Leverage Ratio*, Document 2016/54, State Council, 22 September 2016; available at: https://www.gov.cn/gongbao/content/2016/content_5124355.htm (accessed on 4 September 2023).

1373 *Several Opinions on the Issues of Financial Claims and Liabilities Involved in Resolving Overcapacity of the Iron and Steel Industry and the Coal Industry*, Document [2016] 51, NDRC, MIIT and CBRC, 1 December 2016; available at: https://www.gov.cn/xinwen/2016-12/16/content_5148914.htm (accessed on 4 September 2023).

1374 *Guidelines on Supporting the Steel and Coal Industries to Resolve Overcapacity and Achieve Turnaround in Development*, PBOC, CBRC, CSRC, CIRC, 17 April 2016; available at: https://www.gov.cn/gongbao/content/2016/content_5095765.htm (accessed on 4 September 2023).

1375 *Circular of the PBOC and CBIRC on Effectively Carrying out the Work on Providing Financial Support for the Stable and Healthy Development of Real Estate Sector*, 11 November 2022; available at: https://www.gov.cn/xinwen/2022-11/23/content_5728454.htm (accessed on 4 September 2023).

1376 Cao, D., Cai, J., *Shenyang weighing takeover of Brilliance China's major owner, sources say*, Bloomberg, 25 May 2023; available at: https://www.bloomberg.com/news/articles/2023-05-25/shenyang-said-to-mull-takeover-of-brilliance-china-s-major-owner (accessed 4 September 2023).

1377 *Ibid.*

Government's SASAC to take over the company[1378] which would be a RMB 16 billion transaction[1379]. In August 2023, the restructuring plan was approved[1380].

Finally, the question remains how the merger of inefficient groups will actually result in higher efficiency[1381], unless major efforts are undertaken to improve the corporate governance and profit efficiency of the merged entities[1382].

11.4.4.2.2. Debt-to-Equity Swaps

The debt-to-equity swap program initiated by the State in 2016[1383] aims at lowering the debt ratios of companies in financial difficulty and decreasing their financing costs by replacing high-interest rate bank loans with relatively cheaper equity capital. Through August 2022, the accumulated value of debt-to-equity swap deals had grown to RMB 2 trillion[1384].

Debt-to-equity swaps for distressed companies also take place outside of China. However, in market economies, the process is normally market driven, i.e. a company in financial distress will offer a swap to the financial market, which will decide whether or not to accept the offer. Depending on the company's financial strength, the debt will be taken over at face value or at a discount. In the Chinese case, the process is largely State driven and suffers from information asymmetry; thus, pricing is not market determined[1385].

Although a diverse group of bank and nonbank financial institutions is charged with implementing China's swap program, commercial banks and in particular state-owned banks

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1378 *Inside information update on restructuring of controlling shareholder,* Brilliance China Automotive Holdings Limited, 31 May 2023; available at: http://iis.aastocks.com/20230531/10754893-0.PDF (accessed 4 September 2023).

1379 Cao, D., Cai, J., *Shenyang weighing takeover of Brilliance China's major owner, sources say*, Bloomberg, 25 May 2023; available at: https://www.bloomberg.com/news/articles/2023-05-25/shenyang-said-to-mull-takeover-of-brilliance-china-s-major-owner (accessed 4 September 2023). *Inside information update on restructuring of controlling shareholder,* Brilliance China Automotive Holdings Limited, 31 May 2023; available at: http://iis.aastocks.com/20230531/10754893-0.PDF (accessed 4 September 2023).

1380 Reuters (2024) – *No discussion of stake sale in China BMW joint venture – Shenyang document;* available at: https://www.reuters.com/business/autos-transportation/no-discussion-sale-stake-china-bmw-joint-venture-shenyang-document-2024-01-18/#:~:text=Last%20August%2C%20creditors%20and%20a,bankrupted%20shareholder%20of%20Brilliance%20China (accessed on 8 March 2024).

1381 *OECD Economic Surveys 2017*, OECD, p. 38.

1382 See on this issue for instance Xiao, Z., Ming, Y., Gao, C., *Does mixed-ownership reform improve SOEs' innovation? Evidence from state ownership*, China Economic Review, Volume 61, June 2020; available at: https://doi.org/10.1016/j.chieco.2020.101450 (accessed on 4 September 2023).

1383 *Opinions of the State Council on Actively and Steadily Lowering Enterprise Leverage Ratio*, Document 2016/54, State Council, 22 September 2016; available at: https://www.gov.cn/gongbao/content/2016/content_5124355.htm (accessed on 4 September 2023).

1384 CBIRC press release of 23 September 2022; available at: https://www.nbd.com.cn/articles/2022-09-23/2476731.html (accessed on 4 September 2023).

1385 "[I]*n the case of China's debt-to-equity swap market, information asymmetry, lack or key pricing infrastructure, and too much state intervention have significantly restricted the role of market forces in determining fair prices of swaps*". See Huang, T., *Tracking China's debt-to-equity swap program: 'Great cry and little wool'*. Peterson Institute for International Economics, 24 June 2019; available at: https://www.piie.com/blogs/china-economic-watch/tracking-chinas-debt-equity-swap-program-great-cry-and-little-wool (accessed on 4 September 2023).

are still the key players[1386]. Because commercial banks are not allowed to hold directly the equity of companies (except in special circumstances[1387]), they generally establish an '*implementing agency*', which is typically a financial asset investment company ('*FAIC*') in which a commercial bank registered in China should be the primary promoter[1388]. Implementing agencies are also allowed to raise funds from external investors, such as WMPs and social capital (insurers, pension funds) to support the swaps[1389]. The idea is that banks could then transfer their initial exposure to new investors (i.e. mainly households)[1390]. However, in reality, banks' exposure to the debt-at-risk remains essentially the same, especially if the WMPs are in fact their own subsidiaries.

In principle, the first thing equity holders of a distressed company would be expected to do in a market economy is to restructure the company and replace its management. But in China, the new owners are actually the financial institutions via their implementing agencies. In fact, the debt-to-equity swap program has been mainly implemented by the five largest state-owned banks; as of April 2019, the FAICs set up by just these five banks had executed nearly 70% of signed swap projects, representing 44% of the signed swap value[1391]. While it is true that a company with good prospects of getting back on track would have no incentive to surrender its equity at a distressed valuation to a state-owned financial institution, the fact that the companies were facing significant financial difficulties suggests that the equity value should have been heavily discounted. However, there are indications that swaps are conducted at face value instead of at a discount[1392].

1386 *Ibid.* See also Circular [2018] 1442 of the NDRC, PBOC, MOF, CBIRC, and CSRC on Encouraging Relevant Institutions to Participate in Market-Oriented Debt-for-Equity Swaps, 13 November 2018; available at: https://www.gov.cn/xinwen/2018-11/19/content_5341777.htm (accessed on 4 September 2023).

1387 For example, banks may hold equity interests of distressed companies as a result of enforcing a pledge attached to the equity interest, but only for up to two years. See Article 42 of the Banking Law.

1388 *Administrative Measures for Financial Asset Investment Companies (for Trial Implementation)*, CBIRC, 29 June 2018; available at: https://www.gov.cn/gongbao/content/2018/content_5319826.htm (accessed on 4 September 2023).

1389 Circular [2018] 152 of the NDRC, PBOC, MOF, CBRC, SASAC, CSRC, CIRC on Specific Policies for the Implementation of Market-Oriented Debt-for-Equity Swaps of Banks, 19 January 2018; available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201801/t20180125_962652.html (accessed on 4 September 2023);, Circular [2018] 1442 of the NDRC, PBOC, MOF, CBIRC, & CSRC on Encouraging Relevant Institutions to Participate in Market-Oriented Debt-for-Equity Swaps, 13 November 2018, https://www.gov.cn/xinwen/2018-11/19/content_5341777.htm (accessed on 4 September 2023); Circular of the CBIRC on Matters Relating to Asset Management Business Conducted by Financial Asset Investment Companies, 16 April 2020. https://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=902411&itemId=926 (accessed on 4 September 2023).

1390 *China's supply-side structural reforms: Progress and outlook*, The Economist Intelligence Unit, 2017, p. 16; available at: http://www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=China_SSSR_EN.pdf&mode=wp&campaignid=ChinaSSSR2017 (accessed on 31 August 2023).

1391 Huang, T., *Tracking China's debt-to-equity swap program: 'Great cry and little wool'*. Peterson Institute for International Economics, 24 June 2019; available at: https://www.piie.com/blogs/china-economic-watch/tracking-chinas-debt-equity-swap-program-great-cry-and-little-wool (accessed on 4 September 2023).

1392 Lo, C., *China's debt-equity swaps – a wake-up call for structural reforms*, BNP Paribas Asset Management, 17 November 2020; available at: https://china.bnpparibas-am.com/portfolio-perspectives/chinas-debt-equity-swap-programme-the-good-the-bad-and-the-ugly-en/ (accessed on 4 September 2023).

There is further evidence that swaps are sometimes conducted by financially unviable companies, which should not be the case in a market-driven process. This is despite the fact that the State Council's guidelines state that companies with no financial prospects would not be eligible for debt-to-equity swaps[1393]. The idea is that debt-to-equity swaps should only be initiated for enterprises that cannot service their immediate debts but are considered by the lender to be financially sustainable in the medium- to long-term. Only a limited group of firms conform to both these conditions, thus restricting in theory the potential scale of such measures[1394].

However, in practice, a significant share of swaps – 58% in terms of value and 37% in terms of number of swaps – initiated between October 2016 and August 2019 took place in the coal and steel sector, in which overcapacities and zombie companies were relatively common features[1395]. Data from 2019 also show that the debt-to-equity swap program had done little to cut China's high leverage, at least in part due to a lack of participation by private investors[1396]. In 2020, the CBIRC issued the Circular on Matters Relating to Asset Management Business Conducted by Financial Asset Investment Companies to solve the fundraising challenge faced by implementing agencies by allowing retail investors to invest in products backed by debt-to-equity assets[1397]. At the same time, the CBIRC also recognized the high risk of debt-to-equity swaps, as apparent from the statement of a senior official when explaining the new rules: "*requirements for retail investors are higher than for other asset management products because debt-to-equity swaps often involve higher risks*"[1398].

Thus, it seems that in their current form, Chinese debt-to-equity swaps help avoid short-term bankruptcies and loss of employment, but they are less effective at addressing the fundamental issues underlying China's debt problem. In addition, they add to overall systemic risks in the Chinese financial sector, as part of the debt burden is shifted to retail investors and households through WMPs[1399].

11.4.4.3. BANKRUPTCIES

While defaults or liquidation are not the preferred scenarios for companies in distress in China (see Section 6.7), the Government in 2019 unveiled a reform plan to strengthen market-based

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1393 *Opinions of the State Council on Actively and Steadily Lowering Enterprise Leverage Ratio*, Document 2016/54, State Council, 22 September 2016; available at: https://www.gov.cn/gongbao/content/2016/content_5124355.htm (accessed on 4 September 2023).

1394 *OECD Economic Surveys 2017*, OECD, 2017, p. 18.

1395 *Things about debt-to-equity swaps*, Sinolink Securities, 2019; available at: https://zhuanlan.zhihu.com/p/77179104 (accessed on 4 September 2023).

1396 Huang, T., *Tracking China's debt-to-equity swap program: 'Great cry and little wool'*. Peterson Institute for International Economics, 24 June 2019; available at: https://www.piie.com/blogs/china-economic-watch/tracking-chinas-debt-equity-swap-program-great-cry-and-little-wool (accessed on 4 September 2023).

1397 Circular of the CBIRC on Matters Relating to Asset Management Business Conducted by Financial Asset Investment Companies, 16 April 2020. https://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=902411&itemId=926 (accessed on 4 September 2023).

1398 *Ibid*.

1399 *China's zombie state-owned enterprises benefit from surge in debt-equity swaps*, China Banking News, 22 August 2017; available at: https://www.chinabankingnews.com/2017/08/22/chinas-zombie-state-owned-enterprises-benefit-surge-debt-equity-swaps/ (accessed on 4 September 2023).

exit mechanisms by making insolvency and restructuring a more credible option[1400]. As a result, the number of bankruptcy cases has increased[1401], including for example the reorganization of Hainan Air Group, the largest as of the writing of this Report involving creditors' rights of over RMB 1,6 trillion[1402].

Nonetheless, as described in Section 6.7.2, the number of insolvency cases is low for an economy the size of China and enforcement of China's Bankruptcy Law remains overall weak and inconsistent. Defaults, especially for large companies and SOEs, have often been handled on a case-by-case basis with differing degrees of state intervention and transparency, and with a preference for keeping companies alive. This results in the survival of unviable companies that contribute to excess production capacities and amounts to an implicit state guarantee that artificially reduces the cost of capital.

11.5. CHAPTER SUMMARY

Access to capital for corporate actors in China is subject to various distortions given the strong State presence and regulatory controls governing the formal financial system. Firstly, the State plays an undue role in allocating capital. This results in a bias toward lending to SOEs and private businesses with close government ties, crowding out other players in the market. The inefficient allocation of capital is particularly evident in the fact that there is a negative correlation between productivity and leverage, with less profitable SOEs bearing a disproportionate share of indebtedness. This has been exacerbated by China's economic response to COVID-19, which leaned heavily on SOEs through credit-fuelled investment. It is clear that the mechanisms at work in the banking system do not follow normal commercial responses (see Section 11.2.1).

Policy signals provided by the Government concerning strategic sectors also play a role. The Government seeks to direct investment into key projects and industries by, inter alia, offering loan interest subsidies, loan guarantees and other means of reducing capital costs. Moreover, banks and other lenders are encouraged to support these policies by providing loans to companies active in such sectors. This generates further lending bias, which fundamentally distorts China's financial markets (see Section 11.2.2).

Secondly, the cost of capital is not the result of free market forces. Although China has continued to liberalise its interest rate regime through the LPR, in September 2022 34% of loans were made below the benchmark (see Section 11.3). Further, China has made notable use of selective liquidity support. For example, the state subsidises loans to scientific and technological enterprises. Due to artificially low borrowing costs removed from the typical risk-return relationship, China has seen a continued credit boom characterised by overinvestment and excessive use of capital (see Section 11.4.1).

1400 *Circular on Issuing the Reform Plan for Accelerating the Improvement of the Market Entity Exit System*, NDRC et al., 22 June 2019, available at: https://www.gov.cn/guowuyuan/2019-07/16/5410058/files/bbaef6612fed4832b70a122b39f1d5bd.pdf (accessed on 4 September 2023).

1401 Zhao, J., Gu, W., Hou, Y., Chen, J., *Restructuring and insolvency increase in China*, IFLR; available at: https://www.iflr.com/article/2af6gcnl855tnepvguxa8/sponsored/restructuring-and-insolvency-increase-in-china (accessed on 4 September 2023).

1402 *Ibid.*

The rising incremental capital-to-output ratio and growth of credit intensity indicate a worsening efficiency of capital allocation. Non-performing loans are thus an increasing concern, as has recently played out in the real estate sector in particular (see Section 11.4.3). Nonetheless, China has in part masked the issue through evergreening loans and restructuring debt, including through M&A activity and debt-to-equity swaps, without fundamentally addressing the debt problem and its root causes (see Section 11.4.4).

In essence, despite the recent steps that have been taken to liberalise the market, the corporate credit system in China is affected by significant systemic distortions resulting from the continuing pervasive role of the state in the capital markets.

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12.1. INTRODUCTION

China's economy consumes vast quantities of raw materials. This is why security of supply is one of the most important targets, often underlined in the Chinese policy documents, in particular the respective sectoral 14th FYPs (see Chapter 4, as well as Section 12.2.1). China continues to invest in securing reliable supplies of raw materials, inside and outside of China. Indeed, in 2021, investment in geological exploration within China reached RMB 97.29 billion out of which RMB 79.91 billion was invested in the exploration of oil and gas minerals while RMB 17.38 billion was invested in the exploration of non-oil and gas minerals[1403].

China is also the leader in the production and consumption of raw materials globally. According to the Commission's 2023 study on critical raw materials[1404] which screened 70 candidate raw materials comprising 67 individual materials and three materials groups: ten heavy ('*HREEs*') and five light ('*LREEs*') rare earth elements, and five platinum-group metals, i.e. 87 individual raw materials in total[1405], China is the largest supplier of several critical raw materials[1406] (see Table 12.1 below).

1403 Ministry of Natural Resources (2022). *China Mineral Resources 2022*, PRC, Geological Publishing House, Beijing.

1404 See European Commission (2023). *Study on the Critical Raw Material for the EU, Final Report*; available at: https://ec.europa.eu/docsroom/documents/54114/attachments/1/translations/en/renditions/native (accessed on 22 August 2023).

1405 *Ibid.*, p.5, for the full list of raw materials.

1406 *Ibid.*, p.10.

Table 12.1:Raw materials with the largest China's global supply share

Raw material	China's global supply share, in % (*italics – extraction stage*; regular font – processing stage)
Aluminium	56
Antimony	*56*
Arsenic	44
Baryte	*44*
Bismuth	70
Cobalt	60
Coking Coal	*53*
Copper	38
Fluorspar	*56*
Gallium	94
Germanium	83
Lithium	56
Magnesium	91
Manganese	58
Natural graphite	67
Nickel	33
Phosphate rock	*44*
Phosphorus	79
Scandium	67
Silicon metal	76
Titanium metal	43
Tungsten	86
Vanadium	*62*
LREEs	85
HREE	100

Moreover, China is the world's largest producer of indium, molybdenum, strontium and tin, and has the second-largest reserves of cadmium, diatomite, lead and zinc, as well as a significant position on iron ore, gold and mercury[1407].

All manufacturing industries require raw materials which therefore enter practically every supply chain. Upstream industries extract, refine and process raw materials while downstream industries further use the processed materials in the manufacturing process. Significant shifts in the demand for raw materials occur, not least in view of the development of hi-tech products and environmental applications, with certain raw materials previously found in niche applications becoming crucial components in a number of products, ranging from wind turbines and solar panels (see Chapter 10) to semiconductors (see Chapter 19) to new energy vehicles (see Chapter 22) etc.

More broadly, raw materials used in the production process can be divided into a number of subgroups, including:

- metals which can be further subdivided into precious metals, ferrous metals, non-ferrous metals, rare earths etc.;
- industrial minerals;
- mineral fuels;
- agricultural commodities which can be further subdivided into grains, oils, cotton etc.;
- wood-based products which can be further subdivided into logs, sawn wood etc.; and
- other raw materials used for manufacturing processed products.

This chapter considers raw materials and other material inputs as a broad category encompassing various types of natural resources used as production inputs in the manufacturing process. Focusing mainly on various forms of governmental measures, this chapter will describe in detail individual Chinese policies which impact the functioning of the relevant raw material markets. Complementing this chapter, certain production inputs are examined in more depth in dedicated chapters, such as energy in Chapter 10, steel in Chapter 14, aluminium in Chapter 15 or chemicals in Chapter 16.

12.2. Policy Measures concerning Raw Materials

Raw materials encompass a broad range of different categories of unprocessed and processed materials and are covered by a number of policy measures. This section will first analyse the relevant national level FYPs (see Section 12.2.1), followed by provincial level FYPs and other policy documents relating to raw materials.

12.2.1. National Sectoral FYPs and Other Policies

According to the 14th FYP (see Section 4.2.5), China will "*accelerate the construction of a manufacturing powerhouse*", as well as "*build a modern industrial system with coordinated development of the real economy, technological innovation, modern finance, and human*

1407 Hilpert, H.G., Mildner, S.A. (2013). *Fragmentation or Cooperation in Global Resource Governance? A Comparative Analysis of the Raw Materials Strategies of the G20*, SWP Research Paper 2013/RP 01, German Institute for International and Security Affairs.

resources"[1408]. This includes the objective to "*transform and upgrade traditional industries, promote the optimization and structural adjustment of raw material industries such as petrochemicals, steel, nonferrous metals, and building materials, expand the supply of high-quality products in sectors such as light industry and textiles, speed up the transformation and upgrading of enterprises in key industries such as the chemical industry and papermaking and improve the green manufacturing system*"[1409]. This goal is accordingly reflected in a number of national level sectoral 14th FYPs relevant for the raw materials segment. Those include but are not limited to[1410] the Raw materials industry development plan (see Section 12.2.1.1), the Plan for revitalisation of particular regions (see Section 12.2.1.2), the Green industry development plan (see Section 12.2.1.5), the Circular economy development plan (see Section 12.2.1.4), as well as the Plan promoting the development of resource-rich regions (see Section 12.2.1.3). The sectoral 14th FYPs are further complemented by a host of policies adopted by central authorities, in particular the NDRC and the respective line ministries, as well as by provincial- and municipal-level planning documents (see Section 12.2.2).

12.2.1.1. 14TH FYP ON DEVELOPING RAW MATERIALS INDUSTRY

Referring explicitly to the task of implementing the 14th FYP and describing the raw materials as the "*bedrock of the real economy* [...] *underpinning the development of the national economy, a key field that shapes China's international competitive edges, and the 'main battlefield' for the restructuring of the industrial foundation and green industrial development*", the 14th Raw Materials FYP covers a wide range of materials. As explained by MIIT when the 14th Raw Materials FYP was introduced, "*in order to enhance the systematic, holistic and collaborative nature of planning and promote the coupling and symbiotic development of industries, the* [Plan] *no longer separately formulates petrochemical chemicals, iron and steel, non-ferrous metals, building materials and other industry plans, but integrates the raw material industry to make a plan. This is also the first time in history*"[1411].

Main features of the plan

The 14th Raw Materials FYP emphasizes that the 13th FYP enabled China to become the world's largest producer of strategic minerals such as crude steel, refined copper, electrolytic aluminium, methyl alcohol, urea, cement and plate glass. It further enabled the country to start dealing with other challenges, including rebalancing serious overcapacity in certain sectors and increasing the proportion of R&D investment, and pushed forward the green transition. At the core of the plan lies the intention to build a new development paradigm largely based on two ideas. The first idea is reducing reliance on imports of primary sources and increasing the resilience of the industrial chain. The second idea is realizing the green and safe development

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1408 See the 14th FYP, Part Three, *Accelerate the development of a modern industrial system and consolidate and strengthen the foundation of the real economy*, Introduction.

1409 See the 14th FYP, Part Three, Article VIII, Section 3.

1410 Other national level planning policy documents include for instance Made in China 2025 (see Section 4.2.3).

1411 See at: https://www.cnii.com.cn/gxxww/gxdt/202112/t20211229_347388.html (accessed on 22 August 2023).

of the raw materials industry in support of other goals, such as peaking carbon emissions and promoting workplace safety[1412].

As other planning documents, the 14th Raw Materials FYP also refers to President Xi's Thought on Socialism with Chinese Characteristics for a New Era as a guiding principle[1413].
The plan also sets out a clearly defined set of *development objectives*, including:

- Striving for the High-End Industry Supply: the intention of the Chinese authorities is to boost the supply of high-end products made of advanced base materials. To reach this objective, the innovation capacity of the new materials industry *"shall be greatly improved, and the share of R&D investment in key sectors is expected to exceed 1.5 percent, enabling China to own a series of proprietary key generic core technologies"*;
- Developing an Appropriate Industrial Structure through significant cuts in production capacity of crude steel and cement, among others. The plan envisions industrial concentration of key fields, as well as enhanced "*synergy between the industrial layout and production factors* [...] *to develop at least five world-class advanced manufacturing clusters in the field of raw materials*";
- Accelerating Green Industrial Development by pursuing specific targets, such as that "*energy consumption per ton of steel in the steel sector shall drop by 2 percent; the energy consumption per unit of cement clinker shall fall by 3.7 percent; and the carbon emissions of electrolytic aluminium are expected to decline by 5 percent. The pollutant emission intensity per unit of output value and the total emissions of pollutants from key sectors are expected to fall as well".*
- Stepping up Digital Industrial Transformation, including by ensuring that "[t]*he Computer Numerical Control (CNC) rate shall be applied to over 70 percent of critical processes. Key sectors shall secure greater progress in realizing digital, Internet-based and intelligent development. Enterprises shall work faster to improve their capacity for Internet security protection. More than 100 intelligent manufacturing demonstration plants and over ten industrial online platforms shall be put in place" [1414].*

The 14th Raw Materials FYP further contains a number of provisions related to individual raw materials sub-sectors (concerning steel, see Chapter 14). The provisions listed below are examples of measures which are likely to have an impact on supply.

Concerning **chemicals and petrochemicals**[1415], the plan envisages that China will "*advance such technology as highly selective catalysts, efficient membrane separation, and the essential safety of dangerous processes, and press ahead with the R&D of special-purpose metallocene-based polyolefin, high-end lubricants, high-purity/ultra-high-purity chemicals, special-purpose industrial gas, olefin produced via the coupling of methane, and other new products"*[1416]. With respect to industrial structure, the layout plan for the petrochemical industry is to be put in place

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1412 *Ibid*

1413 *Ibid*., Section II(I).

1414 *Ibid*., Section II(III).

1415 Raw materials in the petrochemical industry include products of petroleum oil refining while main chemical raw materials generally include, among others, fossil fuels like coal and natural gas, water, salt, limestone and sulphur.

1416 See the 14th Raw Material Plan, Feature 1.

and "*steps will be taken to encourage the petrochemical and chemical sectors to explore the complementary development of the modern coal chemical industry and the traditional refining and chemical industry and the industry of hydrogen production powered by electricity generated from renewable sources* [...]"[1417].

Moreover, a central objective of the plan is to improve chemical and petrochemical industry's competitiveness by taking measures to make leading enterprises bigger and stronger, i.e. by fostering "*a number of pioneering enterprises that could lead the ecosystem of the industrial chain*". In this regard, "*financial institutions will be encouraged to* [...] *provide comprehensive financial services for raw materials enterprises that have implemented mergers and reorganization as well as transformation and upgrading*"[1418].

Similar goals, including fostering pioneering leading enterprises and the related financial support[1419] are foreseen also for the non-ferrous metals[1420] subsector. The general green development goal, which translates into control of the total energy consumption and total carbon emissions features further among the main objectives of the plan concerning non-ferrous metals[1421]. The authorities also plan to "*support dominant enterprises to establish recycling bases and industrial agglomeration areas for* [...] *copper, lithium, nickel, cobalt, tungsten and molybdenum, and promote the integrated development of the recycling, dismantling, processing, classification and delivery of renewable metals*"[1422] and to "*support the development of key domestic mines including iron ores, copper ores and rear earth*"[1423].

As with other raw materials, building materials will also be controlled to reach targets in the total energy consumption and total carbon emissions[1424] and to promote the use of green building materials[1425]. Specifically, the authorities are planning to "*push forward the R&D of such emerging technology as the deep desulfurization and denitrification of cement, enhanced dust removal via chemical agglomeration, and efficient and low-carbon energy conservation,* [...] *to develop an integrated application system for such technology as the tiered purification of non-metallic ores, crystal structure protection, particle shape control technology, special-purpose glass melting and forming technology, advanced ceramic powder preparation technology, high-temperature solid oxide fuel cell powder and component co-firing technology and sintering technology* [...]"[1426].

Implementation of the Plan

As is customary in this type of policy document, a dedicated Section[1427] specifies how the 14th Raw Materials FYP should be implemented: "*Relevant departments of the country shall ensure*

1417 *Ibid.*, Section III(II).
1418 *Ibid.*, Section IV(III).
1419 *Ibid.*
1420 Non-ferrous metals mentioned in the plan include, among others, rear earth metals, aluminium, iron ore, copper and zinc. For aluminium, see Chapter 15 for more details.
1421 See the 14th Raw Material Plan, Section II(III) and Feature 3.
1422 *Ibid.*, Section VII(I).
1423 *Ibid.*, Feature 5.
1424 *Ibid.*, Section II(III).
1425 *Ibid.*, Section III(III).
1426 *Ibid.*, Feature 1.
1427 Section VIII – Guarantee Measures.

the implementation of relevant initiatives according to the division of duties and responsibilities. All localities need to include the main contents and major projects herein in their primary local tasks. Petrochemical and chemical, steel and other key sectors shall formulate specific implementation opinions based on the objectives and tasks of this Plan and the actual conditions in the aforesaid sectors"[1428].

Moreover, "[t]*he leading role of the Plan shall be fully leveraged to strengthen coordination and collaboration between industry policies and policies of fiscal affairs and taxation, finance, investment, import and export, energy, the eco-environment, natural resources and pricing. Competent investment and natural resource departments at all levels shall take the Plan as an important basis for examining and approving investment projects and land and sea use.* [...] *The existing funding channels shall be made full use of to support major projects involved in the Plan. We shall deepen industry-finance cooperation and leverage the role of the national industry-finance cooperation platform to provide strong support for projects in line with the Plan by means of financial services and equity investment"*[1429].

12.2.1.2. 14TH FYP ON REVITALIZATION OF SPECIAL AREAS

The Revitalization and Development Plan for Special Areas during the 14th FYP Period[1430] (*'14th FYP on Revitalization of Special Areas'*) aims to help special areas including underdeveloped regions, old revolutionary base areas, border areas, ecologically degraded areas, resource-rich areas and old industrial cities to better solve problems and play supporting roles[1431]. Chapter VI specifically plans the transformation and development of resource-rich areas to achieve sustainable development[1432]. Raw materials sectors affected by these policies are mainly building materials, chemicals, steel and non-ferrous metals. In this regard, the role of the central government is to coordinate the supporting policies both at central and local level.

The relevant authorities are expected to "*select areas with good mining condition and strong resource and environmental capacity, build a number of energy resource bases and national planning mining areas, actively promote intensive, efficient and green development of energy resources* [...], *accelerate the construction of mining processes, materials research and development,* [...] *cultivate energy chemicals, energy conservation* [...], *new materials, security equipment and other innovative industrial clusters and build a number of influential and distinctive regional industrial innovation centres*" [1433].

By 2025, the corresponding targets are[1434]:

- To create about 10 demonstration cities (districts) for sustainable development of resource-exhausted cities [...];

1428 14th Raw Materials FYP, Section VIII(I).
1429 *Ibid.*, Section VIII(II).
1430 Available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202111/P020211126360075462620.pdf (accessed on 22 August 2023).
1431 14th FYP on Revitalization of Special Areas, Chapter I, Section 2.
1432 *Ibid.*, Chapter VI .
1433 *Ibid.*, Chapter VI, Section I.
1434 *Ibid.*, Feature 4.

- To support about 60 counties and county-level cities to implement comprehensive treatment projects for coal mining subsidence areas [...];
- To support about 90 counties and county-level cities to implement reconstruction and upgrading projects for independent industrial and mining areas [...]; and
- To create about 10 transformation and innovation pilot zones in resource-rich regions.

The 14th FYP on Revitalization of Special Areas also calls for cultivating superseded industries and sets development directions for specific areas. Some examples are listed below[1435] (see Table 12.2 below).

Table 12.2: Development directions for specific areas in the 14th FYP on Revitalization of Special Areas

Development Direction	Region/Cluster	Sector
Transforming and upgrading traditional industries	Liaoning Fushun	chemical new materials and high-end fine chemicals
	Anhui Tongling	copper deep processing
	Jiangxi Jingdezhen	ceramic raw materials
	Shandong Dongying	green petrochemicals
	Henan Sanmenxia	non-ferrous
	Hubei Huangshi	steel deep processing
	Hunan Hengyang	copper lead and zinc
	Guangxi Baise	ecological aluminium deep processing
	Yunnan Gejiu	tin deep processing and comprehensive utilization
	Xinjiang Karamay	petroleum and petrochemical characteristic
Developing SEIs	Hebei Zhangjiakou	big data
	Inner Mongolia Baotou	rare earth innovation
	Fujian Minxi	rare earth and fluorine new materials
	Shandong Zibo	new materials
	Gansu Jinchang	advanced structural materials
	Ningxia Shizuishan	lithium batteries
Developing specialized industrial clusters	Shandong Zaozhuang	coal chemicals
	Hunan Shaoyang	light industry

1435 *Ibid.*, Feature 5.

Development Direction	Region/Cluster	Sector
Transforming and upgrading traditional industries	Liaoning Fushun	chemical new materials and high-end fine chemicals
	Anhui Tongling	copper deep processing
	Jiangxi Jingdezhen	ceramic raw materials
	Shandong Dongying	green petrochemicals
	Henan Sanmenxia	non-ferrous
	Hubei Huangshi	steel deep processing
	Hunan Hengyang	copper lead and zinc
	Guangxi Baise	ecological aluminium deep processing
	Yunnan Gejiu	tin deep processing and comprehensive utilization
	Xinjiang Karamay	petroleum and petrochemical characteristic
Developing service industries with local features	Hebei Handan	high-quality tourism

12.2.1.3. 14TH FYP ON PROMOTING THE HIGH-QUALITY DEVELOPMENT OF RESOURCE-RICH REGIONS

The main objectives of the 14th FYP on Promoting the High-quality Development of Resource-rich Regions[1436] are to strengthen the capabilities of resource-rich regions in safeguarding resources and energy security, and basically establish a modern industrial system led by innovation, accelerated transformation and diversified development (by 2025) and to make resource-rich regions meet high-quality development targets in terms of safeguarding resources and promoting a vibrant economy, ecological environment and people's well-being (by 2035)[1437]. To pursue these objectives, the Government intends to strengthen the planning of surveys, evaluation, exploration, and exploitation of strategic mineral resources and establish a safe and reliable reserve, supply and system for resources and energy[1438].

In order to guide the development of resource-rich regions and encourage localities with industrial foundation and technological advantages to carry out intensive processing of resources, the authorities intend to promote the transformation and upgrading of traditional industries, accelerate the development of new materials, new energy, energy saving and

1436 Available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202111/P020211112402058352817.pdf (accessed on 30 May 2023).
1437 *Ibid.*, Part II.
1438 *Ibid.*

environmental protection, high-end equipment manufacturing and other SEIs that are closely related to deep processing of resources[1439].

In terms of policy support, "*the* [NDRC] *shall take the lead in strengthening work collaboration and do a good job in overall planning and coordination. All relevant departments of the State Council shall provide active support in terms of project construction, capital investment, and system and mechanism innovation in accordance with the division of functions. Provincial governments of all relevant provinces shall* [...], *formulate provincial implementation plans, and develop and promulgate supporting policies and measures*"[1440].

The relevant authorities are further requested to "[c]*ontinue transfer payments to resource-exhausted cities*" and to "[c]*ontinue to arrange central budget investment to support the implementation of coal mining subsidence area comprehensive management project and independent industrial and mining area renovation and upgrading project*"[1441].

12.2.1.4. 14TH FYP FOR DEVELOPING THE CIRCULAR ECONOMY

The 14th FYP for Developing the Circular Economy ('*14th Circular Economy FYP*')[1442], released by NDRC in July 2021, explains the global context in which it should be read as follows[1443]:

> *Developed countries and regions, such as the United States, the European Union and Japan, have systematically deployed a new cycle of action plans to accelerate circular economic development in order to address the new challenges of resource availability across the globe. However, non-economic factors, such as fundamental shifts in the world order and the rise of unilateralism and protectionism, compounded by the impacts brought about by the corona virus pandemic, have severely affected the global manufacturing, and value and supply chains. The uncertainty and instability of supplies of resources worldwide pose major challenges to China's resource security. At the domestic level, China is focussing on building a new development paradigm during the 14th FYP period that is in harmony with the 'domestic-international dual circulation' development pattern, with an emphasis on the domestic circular economy, unleashing the potentials for domestic demand, expanding domestic consumption, raising consumption levels, and building extremely large domestic markets, where demand for resources and energy shall continue to grow robustly. At the same time, China is heavily dependent on foreign supplies for some of its major resources. There is an acute friction between supply and demand, while resource and energy utilisation efficiency remains weak in general.*

Against this background, the 14th Circular Economy FYP emphasizes the importance of increasing the overall efficiency in resource utilisation, stepping up the use of recycled

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1439 *Ibid.*, Part IV (9-11).
1440 *Ibid.*, Part VIII (22).
1441 *Ibid.*, Part VIII(24).
1442 Available at: https://www.gov.cn/zhengce/zhengceku/2021-07/07/5623077/files/34f0a690e98643119774252f4f671720.pdf (accessed on 23 July 2023).
1443 14th Circular Economy FYP, Section I(ii).

resources and building a robust, green, low-carbon circular economy[1444]. This general goal is translated into key objectives: "[b]*y 2025, circular production methods shall be fully rolled out, green design and green manufacturing shall be widely adopted, the integrated resource utilisation capacity shall be significantly increased, and a circular economic system shall basically be in place*"[1445] and specific targets: "[b]*y 2025, major resource productivity shall be increased by about 20% compared to 2020* [...]. *There shall be an integrated utilisation rate of* [...] *60% for bulk solid wastes, 60% for construction wastes, and the recycling of 60 million tonnes of waste paper, 320 million tonnes of scrap steel and 20 million tonnes of renewable non-ferrous metals. The production of recycled copper, aluminium and lead shall reach 4 million tonnes, 11.5 million tonnes and 2.9 million tonnes respectively, and the industrial output for resource recycling will tally RMB 5 trillion*"[1446].

To achieve these goals and targets, the 14th Circular Economy FYP lists a number of main tasks[1447], key projects and actions[1448], as well as modalities of policy support[1449]. While many of the individual provisions of the 14th Circular Economy FYP are hardly objectionable, certain components show the persisting influence of the Government which targets selected priority sectors for regulation: "*promote green manufacturing and upgrade programmes in key sectors such as petrochemical, chemical, coking, cement, non-ferrous metals, electroplating, printing and dyeing, packaging, etc. by formulating industry-specific policies ('one industry, one policy')*"[1450], "*promote clustering and development of recycling industries* [...] *and promote the concentration of resources to advantageous enterprises*"[1451] and leverages the financial system for the objectives set "[t]*o integrate existing funding channels and strengthen support for major and priority projects, and encourage capacity building in the circular economy. To encourage financial institutions to increase their investment in major projects in the circular economy*"[1452].

12.2.1.5. 14TH FYP ON INDUSTRIAL GREEN DEVELOPMENT

Similarly to the 14th Circular Economy FYP, the global context and the local industrial policy implication form the starting point of the 14th FYP on Industrial Green Development ('*14th Green Development FYP*'), released by MIIT in November 2021[1453]. At the outset, the 14th Green Development FYP recalls that "[t]*o peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060 is a major strategic decision made by the Central Committee of the Communist Party of China (CPC) with Xi Jinping at its core. The 14th FYP period is a crucial window for China to address climate change and peak carbon dioxide emissions, and the key*

1444 *Ibid.*, II(i).
1445 *Ibid.*, II(iii).
1446 *Ibid.*
1447 *Ibid.*, Section III.
1448 *Ibid.*, Section IV.
1449 *Ibid.*, Section V.
1450 *Ibid.*, Section III(i)2.
1451 *Ibid.*, Section III(ii)2.
1452 *Ibid.*, Sectrion V(iii).
1453 See at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2021/art_4ac49eddca6f43d68ed17465109b6001.html (accessed on 22 August 2023).

five years for the industrial sector to realize green and low-carbon transformation. Currently, China is still in the process of industrialization and urbanization. Traditional industries remain dominant, while strategic emerging industries and high-tech industries have not become the driving force of economic growth"[1454] and that "[s]*ome developed economies are planning for or already implementing green trading systems such as the carbon border adjustment mechanism"*[1455]. In view of this, China "*shall take a strategic shift towards a 'Manufacturing Power' Strategy and 'Internet Power', with promoting quality development as the theme, supply-side structural reforms as the main task, peaking carbon emission and achieving carbon neutrality as the overall goal*"[1456].

What follows is again a mix of principles, targets, tasks and organisational measures which, just like in the case of the 14th Circular Economy FYP comprise elements ranging from those which do not appear to contradict a market-based resource allocation fundamentals to openly interventionist Government measures. To provide an example which also illustrates that the Chinese policy makers can integrate the seemingly contradictory approaches of 'market-led' and 'government-steered', the 14th Green Development FYP stipulates that China "*shall combine the effective market with a functioning government, give full play to the leading role of enterprises, and give play to the decisive role of market in allocating resources*"[1457].

Accordingly, in order to adopt actions to reduce carbon dioxide emissions in the industrial sector, "[c]*entral government-owned enterprises and large enterprise groups shall play a leading role. Major projects that yield good carbon reduction results and set good examples shall be carried out in key carbon discharging industries and in areas related to hydrogen power and renewable energy application, new energy storage and carbon dioxide capture, and utilization and storage*"[1458].

Another major task specified in the 14th Green Development FYP, namely the transformation of the industrial structure towards high-end, is reflected as follows in the text[1459]:

> *We shall accelerate the development of strategic emerging industries, such as new energy, new materials, new energy vehicles, green intelligent ships, eco-friendly high-end equipment and energy electronics to drive the green and low-carbon development of the whole economy. Efforts shall be made to integrate these industries, form clusters, and ensure they are eco-friendly. We shall help leading companies grow stronger and larger and nurture a number of 'little giant'*[1460] *enterprises that specialize in niche sectors and enterprises that are champions in single manufacturing.*

1454 14th Green Development FYP, Section I(ii).
1455 *Ibid.*
1456 *Ibid.*, Section II(i).
1457 *Ibid.*
1458 *Ibid.*, Section III(i).
1459 14th Green Development FYP, Section III(ii).
1460 See Section 2.3.2

In the same vein, the wording related to the task of promoting recycling in resources utilisation shows that rather than relying on market forces, Chinese authorities are intent on shaping the layout of the sector through government policies[1461]:

> *Both domestic and international sources shall be coordinated to optimize the cross-region and cross-industry allocation of resources. In particular, iron ores, phosphate ores, non-ferrous metals and other mineral resources shall be appropriately developed across the board, and more shall be done to develop the vanadium titanium resources in vanadium titano-magnetite, the fluorine resources in phosphate ores and other co-associated mineral resources. We shall better match the supply and demand of raw materials among enterprises of steel, non-ferrous metals, construction materials and chemicals, to realize more effective and coordinated supply, strengthen the circulation among enterprises, industrial parks and industry clusters and thereby improve resource utilization.* [...] *We shall nurture leading recycling enterprises for main renewable resources, including iron and steel scraps, non-ferrous metal scraps, waste plastics, waste tires, waste paper, waste electronic products, waster batteries, waste oil and waste textiles.*

Last but not least, the 14th Green Development FYP contains the instruction to the financial system to support the goals formulated in the plan[1462]:

> *Investment and financing policies that match with green and low-carbon development shall be formulated, the investment in energy-intensive and high-emissions projects shall be brought under strict control, while more investment and financing shall be channelled to projects related to energy conservation and environmental protection initiatives, new energy, and CCUS. We need to use the national platform for the cooperation between industries and the financial sector, develop a database of green industrial development projects, and enable the innovation of green financial products and services. Financial institutions shall be encouraged to increase the supply of green credit loans* [...].

12.2.2. Provincial Level FYPs and Other Policy Measures

Given the overall structure of the Chinese planning system (see Chapter 4), various provisions concerning raw materials can be found in FYPs and other planning policy measures on the provincial level. These policies implement the national level plans and provide further, more detailed instructions to the relevant authorities. The below overview provides a sampling of such provincial level policy measures.

12.2.2.1. 14TH Raw Material Industry Development Plan - Gansu

Referring to the 14th FYP of Gansu Province, the Gansu 14th Raw Material Industry Development Plan ('*Gansu Plan*')[1463] outlines its scope as including petrochemical, steel, non-

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1461 *Ibid.*, Section III(iv).

1462 *Ibid.*, Section III(ix).

1463 Available at: http://gxt.gansu.gov.cn/gxt/c106992/202201/1959993/files/bc8a41db8b904e55b5bd7017eb42d119.pdf (accessed on 5 June 2023).

ferrous metals, building materials and other industries[1464]. For all the industries within its scope the Gansu Plan list "*striving for industrial growth, enhancing innovation capabilities, extending industry chain, forming industrial clusters and promoting green development*" as the development goals during the 14th planning cycle[1465].

In its subsequent sections, the Gansu Plan lists various goals and targets for individual industries. For petrochemicals, the Gansu Plan focuses on the development of such products as integrated oil-aromatics, propylene, aromatic hydrocarbons, high-end oil products, special hydraulic oil, environmentally friendly solvent oil and photovoltaic hydrogen[1466].

For the non-ferrous metal industry, the main development focus is on products based on nickel, cobalt, copper, aluminium and precious metals[1467]. For the metallurgical industry, on steel, ferroalloy and carbon products[1468]. For the chemical industry, on synthetic rubber, synthetic resin, polycarboxylate, electronic chemicals, medicine and pesticide chemicals[1469]. For the new materials industry, on non-ferrous metal materials (e.g. nickel-copper cobalt powder, salt chemicals, precious metals and rare earth materials), advanced petrochemicals and chemical new materials (e.g. engineering plastics, special synthetic rubbers, special fibres), advanced steel materials (e.g. high-strength plastic automotive steel, energy steel, composite construction steel, mining and agricultural machinery steel, nuclear power stainless steel), advanced inorganic non-metallic materials (e.g. high-performance polishing materials or new energy cutting materials, glass), high-performance fibres and composite materials (e.g. fibre precursors, fatty matrix composites, carbon fibre/metal matrix composites)[1470]. For coal industry, on coal gas, phosgenation products and coal-based fertilizers[1471]. For the building materials industry, on cement, mineral products, steel structure products, new building materials (e.g. low-emission coated glass, photovoltaic glass, high-efficiency bricks and wall materials)[1472].

For each of the above sub-sectors, the Gansu Plan also includes the target output value to be achieved by 2025[1473]. The methods to achieve the set goals comprise a broad range of measures known from other planning documents, including promoting industrial transformation and upgrading[1474], advancing industrial chains[1475] and promoting industrial clustering[1476]. The final part of the Gansu Plan lays out the administrative measures for its implementation[1477], as well as the financial support foreseen for the enterprises concerned[1478].

1464 Gansu Plan, Section 1(1).
1465 *Ibid.*, Section 2(3).
1466 *Ibid.*, Section 3(1).
1467 *Ibid.*, Section 3(2).
1468 *Ibid.*, Section 3(3).
1469 *Ibid.*, Section 3(4).
1470 *Ibid.*, Section 3(5).
1471 *Ibid.*, Section 3(6).
1472 *Ibid.*, Section 3(7).
1473 *Ibid.*, Sections 3(1)-(7).
1474 *Ibid.*, Section 4(2).
1475 *Ibid.*, Section 4(3).
1476 *Ibid.*, Section 4(4).
1477 *Ibid.*, Section 5(1).
1478 *Ibid.*, Section 5(2).

12.2.2.2. 14TH FYP FOR THE HIGH-QUALITY DEVELOPMENT OF THE NONFERROUS METALS INDUSTRY - JIANGXI

Following an overview of the overall development basis and circumstances, the 14th FYP for the High-Quality Development of Non-Ferrous Metals Industry of Jiangxi Province ('*Jiangxi Plan*')[1479] sets out basic principles and major objectives, including those on the target size and structure of the sector[1480]:

> *During the 14th Five Years Plan period, the non-ferrous metals industry shall become the first industry in Jiangxi that earns the operating revenue of more than RMB 1 trillion, and decisive progress shall be secured in the optimization and upgrading of traditional industries.* [...] *The industrial scale shall exceed RMB one trillion. During the 14th Five Years Plan period, the average annual growth rate of the operating revenue of Jiangxi's non-ferrous metals industry shall stand at around ten percent. In terms of operating revenue, the non-ferrous metals industry shall have a scale of more than RMB one trillion by around 2023, and the industries of tungsten, rare earth, and other strategic resources shall have a scale of more than RMB 100 billion by 2025. New results shall be achieved in structural adjustment. We shall see that the types of new material products increase significantly, the industrial layout becomes more reasonable, and the concentration ratio of industry further increases. By 2025, the output value of new materials shall account for over 30 percent of that of the whole non-ferrous metals industry* [...]. *The cultivation of business shall step into new phases. The concentration ratio of copper, tungsten, rare earth, and other key industries shall be further increased. By 2025, we shall develop five leading enterprises with ecological dominance and core competitiveness along the industrial chain, cultivate around 50 national-level technically advanced "little giant" enterprises, and introduce 20 national-level enterprises leading an individual field of the manufacturing industry.*

The Jiangxi Plan then lays down development guidance for individual sub-sectors, namely the copper industry[1481], tungsten industry[1482], rare-earth industry[1483] and the industry of other non-ferrous metals (such as tin, stibium, indium or cobalt), specifying typically which areas/municipalities are to house which projects/clusters and concentrate on which products/industrial processes.

In order to achieve the above-mentioned goals, the Jiangxi Plan prescribes tasks that follow the standard pattern by emphasizing technology innovation capabilities and capacities for industrial public services as well as by straightforwardly specifying the desired industry structure in the province[1484]:

1479 Available at: http://www.jiangxi.gov.cn/art/2021/11/10/art_4999_3717079.html (accessed on 5 June 2023).

1480 Jiangxi Plan, Chapter II, Section III.

1481 *Ibid.*, Chapter III, Section I.

1482 *Ibid.*, Chapter III, Section II.

1483 *Ibid.*, Chapter III, Section III.

1484 *Ibid.*, Chapter IV, Sections I-III.

We shall reinforce the control over key links in the industrial chain. We shall cultivate leading non-ferrous metals enterprises, enhance the control over key links, standards and core technologies. Backbone enterprises are encouraged to hold more mineral resources reserves and enhance their ability to secure resources. [...]

We shall drive the leading enterprises stronger and better. The leading enterprises of non-ferrous metals are encouraged to integrate innovation resources and elements, explore key core technological R&D, improve product quality, enhance comprehensive competitiveness, and become the industrial leaders of technological innovation, transformation and upgrading. The leading enterprises are encouraged to gather assets, resources, talents, market and other elements through resource integration, mergers as well as acquisitions and reorganization, to grow into the "master" enterprises with ecological dominance of the industrial chain.

We shall promote the development of technologically advanced [...] *SMEs* [...]. *We shall create a market environment conducive to the development of SMEs and stimulate their enthusiasm for innovation. We shall give full play to their advantages in small-lot non-ferrous metals varieties for their technologically advanced development. Eligible ones are offered support to apply for the titles of "provincial technologically advanced SMEs" and "national technologically advanced 'little giant'"* [...].

We shall promote the key industry clusters bigger and stronger. The key industry clusters are encouraged to do realistic mapping of industrial chains and develop action plans for industrial clusters to promote advantages and tackle areas of weaknesses, so as to accelerate their growth. With Yingtan the "world copper capital" and Ganzhou the "China Rare Earth Valley" as the core, we shall optimize the spatial layout of industrial clusters [...].

We shall foster a cluster ecosystem for growth. The leading enterprises in the industrial clusters are encouraged to jointly undertake major national and provincial projects with upstream and downstream enterprises, universities and colleges, research institutes, etc., to promote collaborative innovation in the industrial chain and improve the overall innovation capacity of the clusters.

The Jiangxi Plan concludes with an overview of the support policies which are available to the sector, including the financial support and the request to the financial institutions to support the industry with increased credit support[1485]:

We shall offer more targeted policies. We shall implement various policies to support the development of the non-ferrous metals industry, and strengthen the coordination between fiscal, taxation, financial and trade policies as well as industrial policies. We shall increase financial support and encourage enterprises to obtain financing at different levels and in diversified forms. [...] *Financial institutions are encouraged to increase credit support in light of the production and operation characteristics and needs of non-ferrous metals enterprises.* [...] *Non-*

1485 *Ibid.*, Chapter V.

ferrous metals enterprises of new materials are encouraged to apply for the first batch of key new materials insurance.

12.2.2.3. 14TH FYP ON THE HIGH-QUALITY DEVELOPMENT OF MANUFACTURING INDUSTRY – GUANGDONG

Guangdong's 14th FYP on the High-Quality Development of Manufacturing Industry ('*Guangdong Plan*')[1486] contains a number of provisions concerning raw materials, for example in section on advanced materials: "*Focus on the development of high-end steel and special steel and continue to strengthen the management of carbon emissions in the steel industry. Support the development of high-end copper, aluminium, lead, zinc, tungsten and other non-ferrous metal processing and recycled non-ferrous metal recycling remelting and promote the development of high-performance alloy materials. Support the development of high-performance rubber*"[1487].

The final chapter on implementation[1488] of the Guangdong Plan provides a comprehensive overview of how deeply interwoven government, business operators, industry associations and other subject are, providing the necessary platforms and transmission mechanisms on which the government industrial policies rest: "*Strengthen organizational leadership and strategic planning, guide the promotion of key industries across regions,* [...], *promote the construction of new industrial clusters governance mechanism, strengthen planning advocacy guidance to ensure effective implementation of the plan.*"

Section I on Reinforcing organizational leadership sets that "[t]*he leading group for the construction of strong manufacturing province in Guangdong Province coordinates the overall work of the construction of strong manufacturing province, strengthens strategic planning, establishes strategic industry clusters to coordinate and promote the mechanism, builds strategic consulting support institutions for each strategic industry cluster, forms an operable policy toolkit and innovation system and compiles a list of key projects, leading enterprises and single champions* [...]."

Section II aims to strengthen cross-sectoral support collaboration across regions: "[A]*ctively serve the national defence and economic and social development needs and strive for national key industries, major projects, science and technology major special projects and major scientific and technological infrastructure and other layout in Guangdong. Increase the resources, funds, policies and support for the manufacturing industry, the financial resources at all levels in the province combined with the financial arrangements to support the construction of major industrial projects, major park carriers, major R&D platforms in the manufacturing industry. The provinces and municipalities are working together and the departments are coordinating the factors of capital. The government has been supporting the key industries and forming a synergy of efforts. Strengthen the horizontal cross-border cooperation of industries, urge each city to speed up the introduction of policies to guide the differentiated development of local industries according to its own foundation and*

1486 Available at: http://www.gd.gov.cn/attachment/0/438/438152/3458462.pdf (accessed on 5 June 2023).
1487 Guandong Plan, Section III(1)v.
1488 *Ibid.*, Chapter V.

characteristics and realize the division of labour and collaboration in the implementation and promotion of 20 strategic industrial clusters in the key core technologies, basic research, professional talents and policy shortcomings."

Section 3 on Innovative industry cluster governance mechanism aims to *"Promote the construction of 'enterprise + government + intermediary organizations + supporting services', a new type of industry cluster governance mechanism* [...]. *Encourage the development of new cluster promotion organizations led by market players, promote the linkage and cooperation between government, industry, academia, research and finance, better play the role of business associations in policy planning and research, standard setting, publicity and evaluation, service platform building and external exchange and cooperation and enhance the overall operational efficiency of industrial chains and industrial clusters."*

Section IV aims at strengthening the implementation of planning and advocacy guidance by improving *"the monitoring and evaluation mechanism of the implementation of the plan, accelerate the construction of strategic industrial clusters statistical system, all local departments continue to track and evaluate the development goals of the plan, key projects, major project, major policy measures to promote implementation, the implementation of the plan as an important basis for performance assessment. Regularly organize the good development of manufacturing industry clusters, key enterprises, key projects to be informed and praised, summarize and promote the successful experience of promoting the high-quality development of the manufacturing industry around."*

12.2.2.4. 14TH FYP ON THE HIGH-QUALITY DEVELOPMENT OF MANUFACTURING INDUSTRY – FUJIAN

While the 14th FYP on the High-Quality Development of Manufacturing Industry in Fujian Province (*'Fujian Plan'*)[1489] does not focus on raw materials primarily, a range of raw materials is listed among the province's development priorities.

In particular, with regard to chemical raw materials, the Fujian Plan specifies in the context of making leading industries bigger and stronger the need to "[f]*ocus on promoting the construction of large petrochemical projects in "two bases and one special zone", improving the level of integration of refining and chemistry, and enhancing the capacity to guarantee basic raw materials such as olefins and aromatics*"[1490]. Similarly, in the context of planning in advance to cultivate cutting-edge emerging industries, the Fujian Plan calls for vigorous promotion of basic raw materials (such as non-ferrous metals and petrochemicals) and key strategic materials[1491].

The Fujian Plan further underlines the need to develop the metallurgical industry, with a focus on high-end steel, stainless steel and non-ferrous metals[1492]: "*speed up the large scale production of copper, high-precision copper tape, copper tubes, precious metal targets and other products for composite materials and electronic industries. To develop marine copper, to*

1489 Available at: http://www.fujian.gov.cn/zwgk/zfxxgk/szfwj/jgzz/jmgjgz/202107/t20210706_5641624.htm (accessed on 22 August 2023).

1490 Fujian Plan, Section III(1)iii.1.

1491 *Ibid.*, Section III(3)i.

1492 *Ibid.*, Section III(2)ii.

extend the gold-copper deep processing industry chain and accelerate the expansion of Shanghang Copper Industrial Park and Ningde Copper Industrial Base".

The available support to achieve the goals specified in the Fujian Plan entails fiscal and financial support, including *"tax and fee reduction policies to reduce the cost of production and operation of enterprises, as well as instruction to "not arbitrarily downgrad*[e] *credit ratings and loan classifications or arbitrarily compress* [...] *loan scales and credit limits*"[1493].

12.2.2.5. 14TH FYP ON THE HIGH QUALITY DEVELOPMENT OF MANUFACTURING INDUSTRY - CHONGQING MUNICIPALITY

The Chongqing municipality's 14th FYP on the High-Quality Development of Manufacturing Industry (*'Chongqing Plan'*) [1494] can serve as another example of a sub-central level planning document which forms part of the planning matrix described in Chapter 4 and which contains specific provisions concerning raw materials[1495] in the otherwise standard structure of a FYP in which an overview of past achievements and current situation introduces a list of requirements[1496], principles[1497], strategic priorities[1498], development goals[1499] and tasks to be followed by the relevant authorities and other subjects in various sectors of the manufacturing industry.

For instance, in relation to new materials, the Chongqing Plan lists certain advanced non-ferrous alloys (such as high-strength and high-toughness aluminium alloys), high-end synthetic materials (such as polyurethane products), aerogel, graphene and other designated new materials as priorities for development[1500]:

> *Accelerate the construction of alumina projects, actively plan electrolytic aluminium and regenerated aluminium projects, and build a local supply guarantee system for upstream materials that is compatible with the back-end aluminium processing and manufacturing capabilities. Promote existing aluminium processing enterprises to strengthen the research and development of aluminium alloy purification smelting and solidification technology, high-strength, high-toughness large-specification profile plate processing technology and other*

1493 *Ibid.*, Section V(5).

1494 See at: https://www.cq.gov.cn/zwgk/zfxxgkml/szfwj/qtgw/202108/t20210803_9538603.html (accessed on 22 August 2023).

1495 Example of new materials envisaged by the plan are: new high-strength, high-toughness, corrosion-resistant aluminium alloy materials and large-size products for electronics, automobiles, aerospace, rail transit and other fields, high-performance magnesium alloys and their products, titanium alloy structural parts and fasteners, copper High-strength and high-conductivity copper alloys such as alloy precision strips and ultra-long wire products. High-end synthetic materials: polyurethane foam, polyurethane elastomer, water-based polyurethane coating, synthetic leather and other polyurethane products, nylon 66, nylon 6, long carbon chain nylon and other polyamide products, PET, PBT (polybutylene terephthalate)) and other polyester products, PMMA and other polymethyl methacrylate products, VAE, PVB resin and other polyolefin products, polycarbonate products, polyoxymethylene products, BDO products, and the main raw materials of synthetic materials. Glass fiber and products, carbon fiber materials, aerogel materials, graphene materials, functional membrane materials.

1496 Chongqing Plan, Section 2

1497 *Ibid.*, Section 2(2).

1498 *Ibid.*, Section 2(3).

1499 *Ibid.*, Section 2(4).

1500 *Ibid.*, Section 3(4).

technologies, plan and implement high-end aluminium series projects, and continuously enrich the types of aluminium and aluminium alloy products. Accelerate the pace of engineering and industrialization of high-strength and tough titanium alloys for aviation, actively introduce upstream raw material enterprises, and further improve the local titanium alloy industry system. Give full play to the technical advantages in the field of magnesium alloys, promote existing enterprises to accelerate the development of high-performance magnesium alloys and deformed magnesium alloys, magnesium alloy forgings, corrosion-resistant magnesium alloys and other products, expand application scenarios, and further expand the magnesium alloy industry. Promote existing copper processing enterprises to accelerate the development of copper alloy products such as precision strip and ultra-long wire, copper alloy lead frame, and electronic copper foil. [...] *Taking silicon-based aerogels as the starting point, extend the upstream aerosilicone source, inorganic silicon source, functional silane and other aerogel precursors and substrate industry chain, and form a new high-end silicon industry base for aerogel product clusters and a variety of silicon-based chemicals.*

Similarly, in relation to raw materials, the Chongqing Plan lists key subsectors for development[1501]: high-quality green building steel, automotive steel, special steel, high-end stainless-steel products, high-grade cement, special cement, ready-mixed mortar, high-performance concrete; super-large machine-based sand and gravel base [...]

The authorities are then requested to: "*Cultivate industry leaders and 'chain master' enterprises with a dominant position in the industrial ecosystem. Establish a pool of key cultivation enterprises around key industrial chains. Support enterprises to quickly become bigger and stronger through mergers and acquisitions, joint ventures and cooperation*"[1502], as well as to "[s]*upport industrial parks with outstanding characteristics to establish national demonstration bases for new-type industrialized industries and municipal characteristic industrial bases, guide enterprises in related fields to gather in characteristic industrial bases, and create a number of 100 billion-level characteristic industrial clusters*"[1503].

Moreover, the Chongqing Plan requests the local authorities to "[e]*stablish a positive incentive mechanism for bank-enterprise cooperation, guide commercial banks to further firmly establish the awareness of not arbitrarily drawing loans and cutting off loans, appropriately increase the tolerance ratio of non-performing loans, implement policy tools such as medium- and long-term loans, reloans, and rediscounting in the manufacturing industry, promote the introduction of policies to benefit enterprises in finance, accelerate the expansion of direct financing, and reduce the financing costs of enterprises*"[1504].

12.2.3. SUMMARY WITH RESPECT TO PLANS

1501 *Ibid.*, Feature 12.
1502 *Ibid.*, Section 4(5).
1503 *Ibid.*, Section 4(7).
1504 *Ibid.*, Section 5(4).

As noted in the previous Sections, the planning documents regulate numerous aspects of raw materials production and supply, including listing specific industries to be further developed, setting output value targets to be achieved by the end of the planning cycle, prescribing the geographical distribution of industrial sectors, controlling industry structure, putting in place specific support policies (including financial support measure) etc. In all those respects, the planning documents concerning raw materials are fully in line with the FYPs known from other sectors, as described in Chapter 4, as well as in, for example, Chapters 14 or 16.

12.3. MEASURES IMPACTING THE EXPORT OF RAW MATERIALS

12.3.1. INTRODUCTORY REMARKS

Government measures which favour the domestic consumption of raw materials as opposed to an allocation of raw materials on the basis of international supply and demand, tilt the level playing field in favour of the domestic downstream industry. Put differently, these restrictions influence export activities by increasing the relative price of exported products, decreasing the quantity supplied or changing the terms of competition among suppliers.

The OECD Inventory of Export Restrictions on Industrial Raw Materials lists the following types of export restrictions:

- export tax;
- fiscal tax on exports;
- export surtax;
- export quota;
- export prohibition;
- Non-automatic licensing requirement;
- minimum export price or price reference for exports;
- VAT tax refund reduction or withdrawal;
- restriction on customs clearance point for exporters;
- qualified exporters list;
- domestic market obligation;
- captive mining;
- other export measures[1505].

Those, as well as any other measures restraining exports, drive domestic prices down and create a comparative advantage for the domestic producers. An OECD study on the subject recognises that export restrictions "*indirectly subsidise domestic industries that use the restricted commodity as input. Assisting downstream industries to grow and compete may be the intended result of such restrictions*"[1506].

1505 OECD (2022). *Methodological note to the Inventory of Export Restrictions on Industrial Raw Materials*. OECD, available at: https://www.oecd.org/trade/topics/trade-in-raw-materials/documents/methodological-note-inventory-export-restrictions-industrial-raw-materials.pdf (accessed on 19 October 2023).

1506 OECD (2014). *Export Restrictions in Raw Materials Trade: Facts, Fallacies and Better Practices;* available at : https://issuu.com/oecd.publishing/docs/oecd-export-restrictions-raw-materi (accessed on 19 October 2023).

Export restrictions can lead to considerable price differences between China and the world market. The export restrictions in practice limit the exports significantly (depending on the amount of the export duty) and keep the products on the domestic market. The increased supply on the domestic market drives the domestic prices for those products down, giving downstream industries access to cheaper raw materials. The cheaper raw materials mean lower downstream production costs, increasing the competitiveness of downstream producers and potentially enabling them to undercut international prices and expand their exports.

According to the OECD Inventory of Export Restrictions on Industrial Raw Materials, between 2020 and 2022, China applied export taxes (export duties), export quotas and non-automatic export licensing requirements as export restricting measures on some goods. This list is not exhaustive. As a result, producers in China can often purchase raw materials cheaper than foreign competitors. This provides them with a strong competitive advantage with regard to both prices and availability[1507].

12.3.2. EU-WTO Disputes with China on Export Restrictions

If one or very few countries command a large share of global output of certain critical or otherwise important raw materials, foreign customers have very few alternative sources to turn to. As an example, China is a world leader in the production of the following raw materials which are subject to export restrictions: rare earths, magnesite , fluorspar, vanadium, phosphates, molybdenum[1508] (see Table 12.1 for China's shares of global output). Historically, the export restrictions had serious repercussions for global commodity prices. For example, between 2010 and 2011, the prices of antimony, tungsten and rare earths as a whole doubled, whereas some elements like lanthanum and cerium (both rare earths) increased by 900%[1509]. In most cases there were few or no substitutes available for many of the necessary inputs, and substitution would incur significant increase in the production costs or compromise the performance of the product in which the input is used[1510].

To date the EU already brought three WTO disputes[1511] against export restricting measures imposed on raw materials by the Chinese government.

Following the legal action by the EU, China abolished the export restrictions on the raw materials subject to those disputes. However, China continues to impose export restrictions on

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1507 For example, due to an export tax and no VAT refund for raw materials for seamless stainless steel pipes and tubes, the prices of these raw materials in China were around 30% lower than in the US and the EU. See Commission Regulation (EU) No 627/2011 of 27 June 2011 imposing a provisional anti-dumping duty on imports of certain seamless pipes and tubes of stainless steel originating in the PRC, recitals 26 and 27.

1508 OECD (2014). *Export Restrictions in Raw Materials Trade: Facts, Fallacies and Better Practices; available at :* https://issuu.com/oecd.publishing/docs/oecd-export-restrictions-raw-materi *(accessed on 19 October 2023).*

1509 *Ibid.*

1510 *Ibid.*

1511 WT/DS395 - China - Measures Related to the Exportation of Various Raw Materials; WT/DS432 - China - Measures Related to the Exportation of Rare Earths, Tungsten and Molybdenum; WT/DS509 - China - Duties and other Measures concerning the Exportation of Certain Raw Materials. For details on these disputes see the 2017 version of this Report.

a number of other raw materials and other products. This fact has been a long-standing concern for the EU and other WTO Members.

12.3.3. Export Restrictions Applied by China

12.3.3.1. Export Duties

An export duty, also referred to as an export tax, export tariff, export levy or export charge, is a tax collected on goods or commodities when they leave a customs territory. It can be set either on a *per unit* or an *ad valorem* basis[1512].

The imposition of export duties is not per se prohibited under WTO law. However, the imposition of export duties in practice limits the exports significantly (depending on the amount of the export duty) and keeps the products on the domestic market. As already noted above, the increased supply on the domestic market, which is not necessarily linked to an increased demand, is likely to drive the domestic prices for those products down. This in turn can imply that the downstream industry gains access to cheaper raw materials, with accordingly lower costs of production. Depending on the circumstances of the case, this can in consequence enable the downstream industry of the country imposing the export duties to undercut the international prices of the downstream products and expand their exports of the finished products.

China is one of the few WTO Members who undertook as a part of its accession obligations to eliminate export duties, unless otherwise specified in the protocol. Paragraph 11.3 of the CAP states that "*China shall eliminate all taxes and charges applied to exports unless specifically provided for in Annex 6 of this Protocol or applied in conformity with the provisions of Article VIII of the GATT*[1513] *1994*". Annex 6 titled '*Products Subject to Export Duty*' contains a table listing 84 different products (each identified by an eight-digit Harmonized System (HS) number and product description) and specifies a maximum export duty rate for each.

China maintains basic framework legislation authorising the imposition of export duties:

- the Foreign Trade Law (as revised on 17 November 2016);
- the Customs Law (adopted at the 19th Meeting of the Standing Committee of the Sixth National People's Congress on 22 January 1987, amended 28 December 2013, in Order No 8, and then revised on 4 November 2017);
- Regulations on Import and Export Duties (State Council, Order No. 392, adopted at the 26th executive meeting of the State Council on 29 October 2003, amended 1 March 2017, in Order No. 676);
- State Council Customs Tariff Commission Notice on Issuing the 2017 Tariff Adjustment Plan (State Council Customs Tariff Commission, Shui Wei Hui [2016] No. 31, issued 19 December 2016, effective 1 January 2017) (the '2017 Tariff Adjustment Plan');

1512 OECD (2014). *Export Restrictions in Raw Materials Trade: Facts, Fallacies and Better Practices*; available at : https://issuu.com/oecd.publishing/docs/oecd-export-restrictions-raw-materi (accessed on 19 October 2023).

1513 General Agreement on Tariffs and Trade.

- General Administration of Customs Notice on the 2017 Tariff Adjustment Plan (General Administration of Customs, Zong Shu Gong Gao [2016] No. 89, issued 30 December 2016, effective 1 January 2017).

On 28 December 2022, the Tariff Commission of the State Council issued *the Tariff Adjustment Plan for 2023*. According to the list in its Annex 6[1514], 160 items are still subject to export duties, and the markets for these products and their downstream products are likely distorted as a result.

12.3.3.2. EXPORT QUOTAS

Export quotas are prescribed maximum volumes of exports. The effect of export quotas is similar to the effect of export duties (increased supply leads to lower prices on the domestic market). The imposition of export quotas considered trade distortive and therefore the imposition of export quotas is in principle prohibited under Article XI of the GATT.

According to the OECD export restrictions inventory, there were around 40 different product groups subject to export quotas in China in 2014[1515]. Since then, China greatly diminished the list of products subject to export quotas. Those include, as of writing of this Report:

- An official list of export items subject to quota published by MOFCOM. It includes mostly agricultural items and products such as sewn timber[1516].
- Phosphates. There were a number of measurers to stop exports of fertilisers from China:
  - In July 2021, the NDRC organised a meeting with major fertiliser producers where the companies made a commitment not to export fertilisers[1517].
  - As from 15 October 2021, fertilisers were added to the catalogue of import and export commodities that must be subject to inspection[1518].
  - A phosphate export licensing system has been in place since 2019[1519].
  - In mid-2022, the export quota was diminished even further[1520].
- Oil: in 2022, the combined export quota for diesel, gasoline and jet fuel amounted to 37.25 million tonnes[1521].

1514 Annex 6 of the 2023 Tariff Adjustment Plan, available at: https://www.gov.cn/zhengce/zhengceku/2022-12/29/5734125/files/a3d59cbc7ee044feb7c45c848476dad1.pdf (accessed on 22 August 2023).

1515 See the 2017 version of this Report.

1516 Full list available at: http://www.mofcom.gov.cn/article/zcfb/zcblgg/202210/20221003363245.shtml (accessed on 22 August 2023).

1517 See the NDRC website: https://www.ndrc.gov.cn/xwdt/xwfb/202107/t20210730_1292363.html?code=&state=123 (accessed on 22 August 2023).

1518 See the NDRC website: http://www.customs.gov.cn/customs/302249/zfxxgk/zfxxgkml34/3957544/index.html (accessed on 22 August 2023).

1519 See press release at: https://www.cccmc.org.cn/hyzx/syhg/ff8080817c30e65b017cfe6f3a9a133e.html (accessed on 22 August 2023).

1520 See Reuters (2022), *China issues phosphate quotas to rein in fertiliser exports – analysts*, available at: https://www.reuters.com/article/china-fertilizers-quotas-idUSKBN2OQ0KY (accessed on 22 August 2023).

1521 See Reuters (2022), *China sets oil products export quotas at about 15 million tonnes*, available at: https://www.reuters.com/business/energy/china-sets-oil-products-export-quotas-about-15-mln-t-sources-2022-09-30/ (accessed on 22 August 2023).

Under the Foreign Trade Law, MOFCOM is responsible for the centralised administration of all export quotas. MOFCOM, in collaboration with Customs, is responsible for '*formulating, adjusting, and publishing*' the catalogue listing all goods subject to export quotas. MOFCOM also determines and announces the total annual export quota for each product covered by the relevant measure by 31 October of the previous year.

China allocates quotas either directly or through a quota bidding system. A decision on allocation must be issued within 30 days from the date of submission of the application and no later than 15 December of the year of application. Enterprises that are approved to export under the quotas are issued a certificate of quota. After obtaining a certificate of quota, the exporter applies for the export licence, which must be issued by the relevant authority within three working days of receiving the application. The exporter then seeks export clearance from Customs by presenting the export quota licence to Customs for declaration and examination.

China may also impose administrative or criminal sanctions for the unlawful exportation of goods subject to restriction, or for forging or altering import or export licences, quota certificates, or other documents. Under the Regulation on Import and Export Administration, the holder of an export quota may be subject to reduction in the allocation of quotas for the following year for failure to return the unused quotas by 31 October of the year for which the export quotas have been issued; or subject to administrative sanctions for exporting without permission, exceeding the quantitative limitations, or buying or selling quota certificates or other documents without approval. Sanctions include revocation of the business licence for foreign trade and possible criminal punishment. Quota administering authorities that distribute quotas exceeding their authority may also be subject to sanction.

In October 2022, MOFCOM published an official list of export items subject to quotas in 2023[1522].

In directly allocating quotas, MOFCOM and the local administrative authorities are directed to take into consideration: *(i)* the export performance of the particular good; *(ii)* the utilization rate of the export quota; *(iii)* the business management/operation capacity of the applicant; and *(iv)* the '*production scale and resources status of the applicant enterprise or area*' during the previous three years.

The legal basis for selecting the products subject to export quota bidding are the Export Quota Bidding Measures which contain a broad variety of selection criteria, including goods that are '*non-renewable, staple-resource-type*' goods or goods '*well-positioned on the international market*' and upon the export volume of which the impact of price fluctuation is relatively little. In general, in order to participate in the bidding process, the enterprises must be: (i) qualified for engaging in export; (ii) registered with the business administration authority; (iii) members of the relevant chamber of commerce for import and export; and (iv) have exported or supplied for export volumes of the relevant commodity that '*reach [...] a certain level.*'

[1522] See the MOFCOM website: http://www.mofcom.gov.cn/article/zcfb/zcdwmy/202210/20221003363245.shtml (accessed on 22 August 2023).

The bidding price represents the amount per metric tonne that a bidding enterprise is willing to pay for the right to export. The bidding quantity is the amount of the relevant material the enterprise seeks to export. The bidding price and quantity, multiplied together, are used to determine the bid-winning price. China ranks all bids from enterprises in descending order, based on the bidding prices that are submitted. China then adds up the bid quantities proposed by the bidding enterprises in this descending list until the total quantity bid is equal to the total quantity of quota available. Those enterprises whose bid quantities are included in the total quantity of quota available are the winning bidders. The winning bidders are thus determined based on the highest bid prices.

Because of the imposition of export quotas, the markets of the products subject thereto and their downstream products are likely distorted.

12.3.3.3. NON-AUTOMATIC EXPORT LICENSING REQUIREMENTS

For certain goods, exporters must obtain prior approval of the government in the form of licenses or permits in order to export the product. This gives the government control over the exporters and the amounts of exported goods. Additionally, the required procedures may increase transaction costs or prevent exporters from reacting quickly to sales opportunities abroad due to long processing times. Non-automatic export licensing requirements are also referred to as export permits[1523].

The OECD Inventory of Export Restrictions on Industrial Raw Materials lists 106 items which were subject to licensing export requirements in 2021 (the newest data available currently), including aluminium, antimony, beryllium, cobalt, coke coal, rare earth metals, ferro-alloys, molybdenum, nickel, silver, tantalum and titanium waste and scrap, tin, tungsten, vanadium, wood and other goods[1524]. The full list of materials subject to export licensing is published annually by MOFCOM in the Catalogue of Goods Subject to Export Licensing[1525].

Based on the draft Regulations on Rare Earth Management (see Section 12.8), the export of rare earths shall abide by the Export Control Law ('*ECL*'), which implies an export approval procedure provided by the ECL. The State Export Control Administrative Departments may deny its approval and prevent rare earths' export when it deems it is necessary[1526].

In July 2023, MOFCOM and the General Administration of Customs announced restrictions on the export of two rare earth elements, namely gallium and germanium, starting from 1 August. Exporters of gallium metal, germanium metal, and twelve associated compounds (i.e., gallium antimonide, gallium arsenide, gallium nitride, gallium oxide, gallium phosphide, gallium

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1523 OECD (2014). *Export Restrictions in Raw Materials Trade: Facts, Fallacies and Better Practices*, available at: https://issuu.com/oecd.publishing/docs/oecd-export-restrictions-raw-materi (accessed on 19 October 2023).

1524 Inventory on export restrictions on Industrial Raw Materials, http://qdd.oecd.org/subject.aspx?Subject=ExportRestrictions_IndustrialRawMaterials (accessed on 26 June 2023).

1525 The full list of products subject to licensing can be found in the catalogue: http://shtb.mofcom.gov.cn/article/fazhengdongtai/202301/20230103380743.shtml (accessed on 23 August 2023).

1526 See: https://www.china-briefing.com/news/china-tightens-control-over-management-of-rare-earths/ (accessed on 23 August 2023).

selenide, indium gallium arsenide, germanium dioxide, germanium epitaxial growth substrate, germanium ingot, germanium tetrachloride, and zinc germanium phosphide) will be required to obtain licenses from MOFCOM prior to exporting them[1527]. These export restrictions are partly based on the Foreign Trade Law and in particular the ECL, which authorizes the government to impose restrictions on exports of certain commodities to "safeguard national security and interests, fulfil international obligations such as non-proliferation, and strengthen and standardize export controls." While China's announcement does not explicitly target any country, the government has said the restrictions are necessary to protect China's national security, leading some observers to believe they may be retaliation for export controls on semiconductors imposed by the US in October 2022 and similar measures undertaken by US allies, including Japan and the Netherlands, as gallium and germanium are integral to the production of semiconductor wafers, integrated circuits, light-emitting diodes, electric vehicles, solar cells, fiber-optic cable, and other electronic components.

In October 2023, in what many call the latest move in the escalating technological rivalry between the West and China, Chinese authorities again invoked the "national security" provision to announce export licensing requirements for graphite. Graphite, a soft form of carbon, is a key component of lithium batteries used in electric vehicles[1528]. China is the world's top producer, accounting for two-thirds of the global supply[1529]. In numbers, China holds a 65% share of natural graphite production, over 75% of synthetic graphite, and more than 90% of spherical graphite, the type primarily used in batteries. It also produces more than 90% of the world's anodes[1530]. Given that the market has more than doubled over the past five years and is expected to triple in the next five years[1531], these latest licensing requirements provide the Government with an additional lever to exert pressure on its trade partners.

12.3.3.4. STATE TRADING

Under the State trading provisions, only certain State Trading Enterprises ('*STEs*') can trade goods specified by the government (exports and imports). According to the WTO Trade Policy Review 2006 of China: "*The continued use of state trading to export these commodities allows the Government to influence their domestic (and export) price. Exports by STEs are determined*

1527 See the MOFCOM website: http://www.mofcom.gov.cn/article/zcfb/zcblgg/202307/20230703419666.shtml (accessed on 23 August 2023).

1528 See Reuters (20 October 2023), *China curbs graphite exports in latest critical minderals squeeze,* available at: https://www.reuters.com/markets/commodities/china-curbs-graphite-exports-latest-critical-minerals-squeeze-2023-10-20/ (accessed on 25 October 2023).

1529 "China boasts a commanding position in the graphite market, with a 65 percent share of natural graphite production, over 75 percent of synthetic graphite, and more than 90 percent of spherical graphite, the type primarily used in batteries. It also produces more than 90 percent of the world's anodes.", Moerenhaut, T. (25 October 2023), *China's Latest Move in the Critical Mineral and Technology Trade War*; available at: https://www.energypolicy.columbia.edu/chinas-latest-move-in-the-critical-mineral-and-technology-trade-war/ (accessed on 25 October 2023).

1530 BenchmarkSource (20 October 2023), *China's graphite export regulation shift puts anote in the spotlight*, available at: https://source.benchmarkminerals.com/article/china-graphite-export-restrictions-could-hinder-ex-china-anode-development (accessed on 25 October 2023).

1531 Moerenhaut, T. (25 October 2023), *China's Latest Move in the Critical Mineral and Technology Trade War*; available at: https://www.energypolicy.columbia.edu/chinas-latest-move-in-the-critical-mineral-and-technology-trade-war/ (accessed on 25 October 2023).

taking into account both domestic and international demand and supply and seek to maintain stable prices of "strategic" agricultural commodities and ensure adequate supplies of inputs to state-run processing industries. Thus, the latter industries enjoy an implicit subsidy"[1532].

Under WTO rules member countries have to regularly notify WTO about their state trading enterprises[1533]. Since China did not submit a notification between 2003 and 2014, in August 2014 the US submitted a counter-notification on China's STEs. China subsequently submitted state trading notifications to WTO in 2016, 2018 and the latest one dating from 2021 (as of the time of drafting of this report)[1534]. The export items listed therein include rice, corn, coal, crude oil, processed oil, tungsten and tungsten products, antimony and antimony products, silver, tobacco and cotton.

12.3.3.5. VAT Refund Withdrawals and Rebates for Processed Goods

Another way of limiting exports of given products are VAT refund withdrawals. According to the OECD definition: "*Most countries with a VAT system will rebate the VAT on exports. By denying VAT reimbursement in whole or part, it is less advantageous to export a product than to sell it domestically. This in turn encourages exports of products produced locally that use the input to produce downstream products. A variant is the removal or reduction of rebate from other sales taxes on exports of a product*"[1535].

According to the Notice of the Ministry of Finance and the State Administration of Taxation on the Policies of Value-added Tax and Consumption Tax Applicable to Exported Goods and Services: "*Unless VAT export tax refund rates (hereinafter referred to as the 'Tax Refund Rate') have been specified by the MOF and the SAT pursuant to the decisions of the State Council, the Tax Refund Rates of exported goods shall be their respective applicable tax rate. The SAT shall, in accordance with the foregoing provisions, release the Tax Refund Rates through the database of Tax Refund Rates for Exported Goods and Services for compliance by both taxpayers and tax authorities*"[1536]. By means of this notice China is maintaining a policy of withdrawing VAT tax refunds for exports on specific items.

1532 WTO Trade Policy Review 2006, WT/TPR/S/161, page 170.

1533 Paragraph 1 of the Understanding on the Interpretation of Article XVII of the General Agreement on Tariffs and Trade 1994 provides that '[i]*n order to ensure the transparency of the activities of state trading enterprises, Members shall notify such enterprises to the Council for Trade in Goods, for review by the working party.*' Paragraph 1 further states: '*Governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through their purchases or sales the level or direction of imports or exports.*'

1534 List of China's WTO notifications, available at: https://notifications.wto.org/en/status-by-member/china (accessed on 23 August 2023).

1535 See OECD (2016). *Methodological note to the Inventory of Export Restrictions on Industrial Raw Materials*, available at: https://www.oecd.org/trade/topics/trade-in-raw-materials/documents/methodological-note-inventory-export-restrictions-industrial-raw-materials.pdf (accessed on 23 August 2023).

1536 Notice of the Ministry of Finance and the State Administration of Taxation on the Policies of VAT and Consumption Tax Applicable to Exported Goods and Services, available at: https://guangdong.chinatax.gov.cn/gdsw/zjfg/2015-01/01/content_b2b7d2139f4347e6a4e124d7067c036d.shtml (accessed on 23 August 2023).

In a number of sectors there are full or partial VAT rebates on downstream products but not on the primary goods. This discourages the exports of unprocessed goods, artificially contributing to lower prices domestically (see the example of aluminium, Section 15.3).

12.4. PRICE SETTING THROUGH THE NDRC

Officially, the role of the NDRC with regard to pricing consists of drafting and implementing price policies; setting the prices and charging standards of important commodities and services that are regulated by the state; and deepening price reforms, timely revising and downsizing the government pricing catalogue, and improving pricing mechanisms that reflect market supply and demand[1537].

Specifically, the State Council Department of Price, which is an NDRC department, is responsible for dealing with pricing issues[1538], including price setting for items subject to the Catalogue of Pricing. [1539] Items subject to price regulation relevant for the purpose of this Report include electricity, oil and gas pipeline transportation and water supply (for energy, see Section 10.2.1)[1540].

12.5. STOCKPILING

Chinese stockpiling activities seem to have a considerable impact on the prices as well as availability of certain commodities in China and worldwide. For example, in 2022, the global food prices were at 10-year highs. One factor contributing to those high prices was China's stockpiling of large amounts of corn, rice and wheat[1541]. There are many other commodities that China is known to stockpile, which contributes to higher prices. It releases them at certain times, potentially affecting global prices.

12.5.1. NATIONAL FOOD AND STRATEGIC RESERVES ADMINISTRATION

The National Food and Strategic Reserves Administration (*'NFSRA'*) is a state agency under the NDRC. It replaced its predecessor the States Reserve Bureau (*'SRB'*), founded in 1953. NFSRA was established on 4 April 2018, based on the Decision of the First Session of the 3rd NPC on the Institutional Reform Plan of the State Council. Based on this document[1542]:

> *The National Food and Strategic Reserves Administration shall be formed. The duties of the State Administration of Grain, the duties of the National Development and Reform Commission to organize the implementation of national strategic*

1537 See the NDRC English website: https://en.ndrc.gov.cn/aboutndrc/mainfunctions/ (accessed on 23 August 2023).

1538 See: https://en.ndrc.gov.cn/aboutndrc/BandD/202105/t20210526_1280939.html (accessed on 23 August 2023).

1539 See at: https://www.gov.cn/zhengce/2020-03/13/content_5713304.htm (accessed on 23 August 2023).

1540 Other items include: special drugs and blood; important transportation services: railroad transportation services, civil aviation transport services, port services; important postal services; important professional services (basic services of commercial banks and service charges on bank card swiping). See Order No. 29 of the National Development and Reform Commission of the People's Republic of China – Catalogue of Pricing by the Central Government.

1541 Bloomberg: Minter, A. (2022) *One Reason For Rising Food Prices? Chinese Hoarding,* available at: https://www.bloomberg.com/opinion/articles/2022-01-05/one-reason-for-rising-food-prices-chinese-hoarding#xj4y7vzkg (accessed on 23 August 2023).

1542 Available at: https://www.gov.cn/guowuyuan/2018-03/17/content_5275116.htm (accessed on 23 August 2023).

material procurement, storage, rotation, and management and the management of the national grain, cotton, and sugar reserves, as well as the duties of the Ministry of Civil Affairs, Ministry of Commerce, National Energy Administration, and other ministries to organize the implementation of purchasing, storage, rotation, and daily management of national strategic and emergency reserve materials will be integrated to form the National Food and Strategic Reserves Administration under the management of the National Development and Reform Commission. The National Food Agency will no longer be retained.

The Regulations on the Functional Allocation, Internal Institutions and Staffing of the NFSRA lists the main responsibilities of NFSRA. However, it does not provide a detailed list of commodities subject to stockpiling. According to Article 3(3), NFSRA shall "[m]*anage the national grain, cotton and sugar reserves, and be responsible for the administration of the central grain and cotton reserves. Monitor changes in the supply and demand of international and domestic food and strategic materials* [...]"[1543]. While there is no mention of the specific products subject to NFSRA's stockpiling in the regulatory documents, the institutional setup suggests that NFSRA manages more than just food. The divisions within NFSRA include, among others, Food Reserve Division, Material Reserve Division, Energy Reserves Division and Emergency Supplies Reserve[1544]. The website of Material Reserve Division mentions in its press releases the following materials: copper, aluminium and zinc[1545], however there is no full list of stockpiled goods, nor quantities of good currently stockpiled. NFSRA has 26 agencies at the provincial level, which are tasked with managing the collection, storage, rotation and outbound of national strategic materials within their jurisdiction, and supervising and inspecting the quantity, quality and storage safety of reserve materials[1546].

It seems that NFSRA, like its predecessor the SRB, holds reserves of commodity metals (such as aluminium, copper, iron, tin), some technical metals (chromium, lithium, manganese, molybdenum, rare earth elements, selenium, tantalum, tungsten, vanadium, zirconium) and potash. US government reports indicate that the SRB probably held stocks of antimony, germanium[1547], cadmium and cobalt[1548]. However, there is no official list of strategic commodities subject to stockpiling[1549]. The NFSRA decides which raw materials and in what quantities will be stockpiled, depending on the forecast demand. There is no transparency of

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1543 Regulations on the Functional Allocation, Internal Institutions and Staffing of the State Food and Material Reserve Administration available at: https://www.gov.cn/zhengce/2018-09/11/content_5320985.htm (accessed on 23 August 2023).

1544 See the NFSRA website: http://www.lswz.gov.cn/ (accessed on 23 August 2023).

1545 See at: http://www.lswz.gov.cn/html/ywpd/wzcb/index.shtml (accessed on 23 August 2023).

1546 See the NFSRA website: http://www.lswz.gov.cn/html/c70129/2019-07/24/content_245807.shtml (accessed on 23 August 2023).

1547 U.S. Geological Survey (2014). *Mineral commodity summaries 2014*: U.S. Geological Survey, p. 196.

1548 Menzie, W.D. (2012). *China's Quest for Resources*. Testimony of W. David Menzie, Chief, Global Minerals Analysis Section, National Minerals Information Center, U.S. Geological Survey, available at: https://www.doi.gov/ocl/hearings/112/ChinaMinerals_012612 (accessed on 23 August 2023).

1549 Hilpert H.G. and Mildner S.A. (2013). *Fragmentation or Cooperation in Global Resource Governance? A Comparative Analysis of the Raw Materials Strategies of the G20*, German Institute for International and Security Affairs.

volumes and flows[1550]. The objective of stockpiling is to avoid price fluctuations and critical shortages[1551].

The activities of the NFSRA can have a considerable impact on the prices as well as availability of certain materials in China and worldwide.

For example, fluctuations in the global price of **copper** are usually linked by analysts to the Chinese stockpiling. The record high global prices of copper in the first half of 2021 were partially attributed to intensive stockpiling activities by China[1552]. According to estimates, the copper stockpile of China in 2021 could have been somewhere around 2 million tonnes[1553]. Later that year, China announced it would release copper, aluminium and zinc to curb commodity prices[1554]. Chinese copper stockpiling activities are highly secretive and subject to speculation. While the visible inventories in China seemed to be at historical lows in 2023, there was also speculation that since 2022 China has been restocking copper, taking advantage of low prices[1555].

Another commodity subject to important stockpiling in China is **aluminium**. China's stockpiling activities in aluminium are described in detail in the Aluminium chapter of this report, in Section 15.5.4.

China is also known to stockpile **zinc**. In 2021, China held an estimated 350 000 tonnes of zinc, which it was planning to partly that year release to bring the global prices down and hence support its manufacturers struggling with high costs[1556]. Information concerning Chinese stockpiling activities is not in the public domain, therefore it is unclear what is the amount of China's zinc reserves.

1550 *Ibid.*

1551 *Ibid.*

1552 Nasdaq.com (2021). *China is Uning its Currency to Stockpile Copper and Grains*, available at: https://www.nasdaq.com/articles/china-is-using-its-currency-to-stockpile-copper-and-grains-2021-01-26 (accessed on 23 August 2023).

1553 CNBC (2021): *China to release copper, aluminium and zinc reserves to stabilise prices*, available at: https://www.cnbc.com/2021/06/16/china-to-release-copper-aluminum-and-zinc-reserves-to-stabilize-prices.html#:~:text=China%20will%20release%20copper%2C%20aluminum%20and%20zinc%20in,firms%20%E2%80%9Cin%20the%20near%20future%E2%80%9D%20via%20public%20auction (accessed on 23 August 2023).

1554 *Ibid.*

1555 Reuters (2023): Column: *While Dr Copper waits for China, China buys more coper*, available at: https://www.reuters.com/markets/commodities/while-dr-copper-waits-china-china-buys-more-copper-2023-01-27/ (accessed on 23 August 2023).

1556 Reuters (2021), Explainer: *What we know about China's metals reserves release*, available at: https://www.reuters.com/world/china/what-we-know-about-chinas-metals-reserves-release-2021-06-17 (accessed on 23 August 2023).

There are also indications that China is stockpiling **cobalt**, with purchases made in 2015 and 2016[1557] a call by NFSRA to purchase cobalt in 2020[1558] and indications it would buy more cobalt in 2022[1559].

There were also reports of China purchasing **nickel,** for example in 2022[1560], however as in case with other metals, the purchases have not been made public and there are only indications pointing to a large nickel stockpile in China.

Another metal which might be stockpiled by China is **tin**, with the tin stockpile held by the Shanghai Future Exchange reaching its 5-year high in 2023 according to some sources[1561]. Again, there uncertainty with respect to the exact nature of these stockpiling activities, with some analysts arguing China does not hold any tin or lead at all[1562].

It seems apart from the above, China also holds antimony, indium, germanium and molybdenum oxide[1563].

While the Chinese stockpile purchases are not announced publicly, there are indications that metal purchases only came from restricted companies and that the main focus was on aiding large SOEs, such as the Aluminium Corporation of China ('*CHALCO*')[1564]. Other suppliers of metals to the Chinese stockpile included the three main domestic suppliers: China Minmetals, Jiangxi Copper Corp and China North Industries Corp (Norinco) in China, as well as Glencore globally[1565].

12.5.2. National Oil Reserve

In 2004, China started to build up strategic petroleum reserves. The International Energy Agency requires that its members hold strategic reserves equivalent to 90 days of petroleum imports[1566] and China set out a plan divided into three phases to reach this goal. The first phase was completed in 2009 with the total capacity of 102 million barrels (13.8 million tonnes) and

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1557 *Ibid.*

1558 Reuters (2020): *China aiming to add to its cobalt stockpile*, available at: https://www.reuters.com/article/china-cobalt-stockpiling-idUKL4N2G82DV (accessed on 23 August 2023).

1559 Erismann, F. Earth Resource Investment (2022), *China stockpiles Copper, Nickel and Cobalt – has the commodity sector bottomed out?*, available at: https://earth-investment.com/en/insight/china-stockt-kupfer-nickel-und-kobalt-auf-ist-der-tiefpunkt-im-rohstoffsektor-erreicht/ (accessed on 23 August 2023).

1560 *Ibid.*

1561 Treadgold, T. Small Caps (2023). *Tin faces a price fall as supply rises*, available at: https://smallcaps.com.au/tin-faces-price-fall-as-supply-rises/ (accessed on 23 August 2023).

1562 Reuters (2021). Explainer: *What China keeps in its secretive commodity reserves*, available at: https://www.reuters.com/world/china/what-china-keeps-its-secretive-commodity-reserves-2021-08-05/ (accessed on 23 August 2023).

1563 *Ibid.*

1564 Financial Times. (2012). *Beijing set to buy up base metals*, 12.11.2012, available at: https://www.ft.com/content/b56082b8-2cee-11e2-beb2-00144feabdc0 (accessed on 23 August 2023).

1565 Metal Bulletin (2015). *China's SRB revealed. Shedding light on the State Reserve Bureau*, A Metal Bulletin-Copper Price Briefing special report, available at: https://www.metalbulletin.com/Article/3475883/Article.html (accessed on 23 August 2023).

1566 Long, H., Wang, S., Wu, W. (2022). *The economic influence of oil shortage and the optimal strategic petroleum reserve*, available at: https://www.sciencedirect.com/science/article/pii/S2352484722014330 (accessed on 23 August 2023).

90% of it filled[1567]. The second phase was planned run between 2010 and 2015, rising the total capacity to 271 million barrels (36.9 million tonnes) and the last phase was supposed to finish in 2020[1568]. However, there was a delay to that initial planning and China announced plans to finalise the second phase by 2020 and then start the third phase[1569]. It is unclear where China is exactly in this progress, as there is no detailed reporting available on the exact amounts of China's current oil reserves. There were some reports that China finished phase two, but also indication that the goal was not met yet[1570]. The initial plan provided that at the end of the third phase, China should have a total stockpile of 68.8 million tonnes, equivalent to 83 days in 2016 net imports of crude oil[1571]. According to NEA, China held around 80 days of oil in storage in 2019, however no specific quantities were disclosed[1572].

12.5.3. STOCKPILING OF OTHER GOODS

12.5.3.1. COTTON

Beijing introduced cotton stockpiling in 2011, as a policy to maintain domestic cotton production and secure raw material supply to the domestic textile industry. This in turn led to a significant increase in Chinese cotton prices, due to a cut in supply of the raw materials to the textile mills[1573]. In 2014, China stopped buying additional cotton, offering subsidies to cotton producers instead. At least part of the cotton reserves was sold by the State in 2014[1574], but in 2017 China still held large reserves of cotton[1575], which according to some accounts could have amounted to 60% of the world cotton stocks[1576]. In July 2022, China National Cotton Reserves Corporation ('*CNCRC*') announced that it would purchase up to 500 000 tonnes of cotton from Xinjiang, in order to support producers hit by a US ban on cotton produced in Xinjiang[1577].

1567 Reuters (2014). *China makes first announcement on strategic oil reserves*, available at: https://www.reuters.com/article/china-oil-reserves-idUSL3N0TA1QE20141120 (accessed on 23 August 2023).

1568 Xie, N., Yan, Z., Zhou, Y., Huang, W. (2017). *China's optimal stockpiling policies in the context of new oil price trend.* Energy Policy, 105, pp. 332-340, available at: https://www.sciencedirect.com/science/article/pii/S0301421517301489 (accessed on 23 August 023).

1569 Reuters (2014). *China makes first announcement on strategic oil reserves,* available at: https://www.reuters.com/article/china-oil-reserves-idUSL3N0TA1QE20141120 (accessed on 23 August 2023).

1570 Tang, F (2021). SCMP: Explainer. *How big are China's crude oil reserves and how do they compare to the US' SPR?*, available at: https://www.scmp.com/economy/china-economy/article/3156952/how-big-are-chinas-crude-oil-reserves-and-how-do-they-compare (accessed on 23 August 2023).

1571 Long, H., Wang, S., Wu, W. (2022).

1572 Reuters (2019). *China has enough oil inventories to last about 80 days*: NEA, available at: https://www.reuters.com/article/us-china-energy-idUSKBN1W514V (accessed on 24 August 2023).

1573 See Financial Times (2014). *China abandons failed cotton stockpiling programme*, 20 January 2014, available at: https://www.ft.com/content/5e0333ce-81a4-11e3-a600-00144feab7de (accessed on 23 August 2023).

1574 See Financial Times (2015). *Datawatch: Chinese cotton price*, available at: http://blogs.ft.com/ftdata/2015/09/03/datawatch-chinese-cotton-price (accessed on 23 August 2023).

1575 See Financial Times (2017). *Cotton price rally goes 'pretty parabolic'*, 15 March 2017, available at: https://www.ft.com/content/34bf621e-3851-11e7-821a-6027b8a20f23 (accessed on 23 August 2023).

1576 See Financial Times (2016). *China pledges to end corn stockpiling*, 29 March 2016, available at: https://www.ft.com/content/15b0fb4a-f59e-11e5-803c-d27c7117d132 (accessed on 23 August 2023).

1577 Siji, J. (2022). South China Morning Post. *China to buy Xinjiang cotton, but state stockpiling won't save mills from massive losses amid US ban,* available at: https://www.scmp.com/economy/china-

12.5.3.2. AGRICULTURAL COMMODITIES

China holds stocks of corn, wheat, rice and other agricultural commodities. As in case of other commodities, there is no official data concerning the Chinese stockpile of agricultural commodities, however according to reports, China might hold even up to 69% of the world's corn reserves, 60% of its rice and 51% of its wheat[1578]. According to the Chinese authorities, in November 2021, China held enough wheat to last for 18 months[1579].

12.6. SHANGHAI FUTURES EXCHANGE

The Shanghai Futures Exchange ('*SHFE*') was founded in 1999 with the merger of the Shanghai Metals Exchange (founded in 1992), the Shanghai Commodities Exchange and the Shanghai Cereals and Edible Oils Exchange.

The SHFE is a closed exchange for Chinese-registered companies and Chinese citizens and is controlled by the CSRC. According to the SHFE's website, the highest authority of the Exchange is the Member's Assembly which consists of all members. Now SHFE has 201 Members. The Board is the standing organ of this assembly with six special commissions (market compliance, trading, delivering, membership review, conciliation, finance and technology) as well as other special commissions when necessary. The internal supervision organ of the Exchange is the Board of Supervisors, and it is responsible for supervising the performance of the Board of Directors and the management.

Currently there are 20 future contracts and six commodity options available for trading on the SHFE, including the futures on copper, aluminium, zinc, lead, nickel, tin, gold, silver, steel rebar, steel wire rod, hot rolled coil, fuel oil, crude oil, bitumen, natural rubber, wood pulp, technically specified rubber TSR 20, stainless steel, LSFO (low sulphur fuel oil) and bonded copper, and also copper option, natural rubber option, gold option, aluminium option, zinc option and crude oil option [1580].

The SHFE Business Services Co., Ltd., Shanghai Futures Information Technology Co., Ltd., Shanghai Futures and Derivatives Research Institute and Shanghai International Energy Exchange ('*INE*') are the subsidiaries of SHFE. INE, set up in the Shanghai Pilot Free Trade Zone in November 2013, is an international exchange and is open to global futures' participants. INE is a self-regulated entity and discharges its duties pursuant to the Chinese Company Law, the Regulations on the Administration of Futures Trading and relevant rules and regulations prescribed by the CSRC. Four futures (crude oil, LSFO (low sulphur fuel oil), technically specified rubber TSR20, copper cathode) and one option (crude oil) are listed in INE[1581].

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economy/article/3185044/china-buy-xinjiang-cotton-state-stockpiling-wont-save-mills (accessed on 24 August 2023).

1578 Bloomberg: Minter, A. (2022) *One Reason For Rising Food Prices? Chinese Hoarding*, available at: https://www.bloomberg.com/opinion/articles/2022-01-05/one-reason-for-rising-food-prices-chinese-hoarding#xj4y7vzkg (accessed on 23 August 2023).

1579 *Ibid.*

1580 See the SHFE website: https://www.shfe.com.cn/eng/about/introduction/overview/ (accessed on 24 August 2023).

1581 Official website of INE: https://www.ine.cn/eng/ (accessed on 24 August 2023).

The previous investigations of the Commission into aluminium products revealed a number of pricing irregularities with regard to the SHFE[1582]. The investigations revealed that the Chinese producers normally acquired raw materials in the Chinese market from local suppliers using Chinese spot market prices (or SHFE prices) as a benchmark. Since the aluminium prices in the SHFE were around 14-15% lower than the world market prices, Chinese operators benefitted from this price difference. Moreover, the Chinese companies could also buy raw materials at London Metals Exchange ('*LME*') prices when prices in the Chinese market are higher, whilst the opposite is impossible for non-Chinese operators, since SHFE is only open to Chinese purchasers.

The SHFE performs its functions in accordance with the Regulation on the Administration of Futures Trading, the Measures for the Administration of Futures Exchanges and its Articles of Association. The investigations unveiled that several rules governing the functioning of the SHFE contribute to low volatility and depressed prices at the SHFE: daily price fluctuations are limited to 4% above or below the settlement price of the previous trading day, trading happens at a low frequency (until the 15th day of each month), futures contracts are limited to a duration of up to 12 months, and transaction fees are charged by both the SHFE and brokers. In addition, the State sets daily price limits via the rules of the SHFE which have been approved by the State Regulator, the CSRC[1583].

Access to the exchange is limited by law only to Chinese traders which also need an approval from CSRC to trade on the exchange. Market representatives of SHFE members can only perform transactions at the request of SHFE members, cannot accept orders from other organizations and cannot trade on their own account[1584].

Moreover, as concerns SHFE transactions, physical deliveries can only take place in an approved warehouse within China, unlike international exchanges, where delivery can take place worldwide. SHFE is a platform for physical exchanges only (no derivatives are sold), which completely insulates the Chinese market for SHFE traded commodities. As a consequence, the exchange works in isolation from other world markets, as arbitrage with the worldwide benchmark – the LME or other markets – is practically not possible. Thus, equalization among these markets cannot take place[1585].

1582 See Commission Regulation (EU) No 404/2010 of 10 May 2010 imposing a provisional anti-dumping duty on imports of certain aluminium wheels originating in the PRC; Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in the PRC; Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in the PRC.

1583 *Ibid.*

1584 See Commission Regulation (EU) No 833/2012 of 17 September 2012 imposing a provisional anti-dumping duty on imports of certain aluminium foils in rolls originating in the PRC.

1585 See Commission Regulation (EU) No 404/2010 of 10 May 2010 imposing a provisional anti-dumping duty on imports of certain aluminium wheels originating in the PRC; Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in the PRC; Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in the PRC.

The investigations furthermore indicated that the State also intervenes with the price setting mechanisms in the SHFE as it is both a seller and a purchaser of primary aluminium via the NFSRA[1586]. As described in Section 12.5.1, stockpiling by the NFSRA has an immediate effect on prices, which is then reflected in price fluctuations on the SHFE, and thus benefits the Chinese purchasers who can purchase raw materials cheaper than their foreign counterparts can.

12.7. PRESENCE OF SOEs

The SOEs active in the commodities sector have a dual structure: on the one hand there are large SOEs with high productivity and leading positions in world markets and on the other hand a large number of smaller, cooperatively owned companies with small output and low productivity.

The most prominent examples of SOEs include CHALCO (aluminium), Baowu Steel and Hebei Iron & Steel (steel), Jinduicheng (molybdenum), Baotou Steel & Rare Earth (rare earth elements), Yunnan Tin (tin), Zijin Mining (gold, copper, zinc) and China Minmetals (metal trading)[1587].

China's SOEs represent a majority in the following raw material industries: professional and support activities for mining (SOEs own 90% of assets in this industry), mining and washing of coal (88%), production and supply of gas (82%), mining and processing of ferrous metal ores (77%), mining and processing of non-ferrous metal ores (73%), mining and processing of non-metal ores (57%), smelting and processing of non-ferrous metals (55%), smelting and processing of ferrous metals (54%), and manufacturing of raw chemical materials and chemical products (49%)[1588].

12.8. RARE EARTHS

Through the use of quotas China is able to control the supply of metals on the market and hence influence their prices. Twice per year MIIT sets quotas for rare earths: a mining quota and a quota for the smelting and separation. The mining quota is further subdivided into quotas for light rare earths and heavy rare earths.

In January 2021, MIIT released draft Regulations on Rare Earth Management that aim "to strengthen oversight of the entire industry chain of rare earth metals, from mining to exports, including refining, product transport, and sales". The proposed regulations extend beyond the current regulations that focus primarily on the production stage of the rare earth industry[1589]. The draft regulations specify that a quota shall be established by government agencies[1590], considering elements such as regional economic policy, industrial capacity and the quota

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1586 *Ibid.*

1587 Hilpert H.G. and Mildner S.A. (2013). *Fragmentation or Cooperation in Global Resource Governance? A Comparative Analysis of the Raw Materials Strategies of the G20,* German Institute for International and Security Affairs.

1588 By total assets, on the basis of main indicators of enterprises by industrial sector in 2021 from the China Statistical Yearbook 2022, National Bureau of Statistics of China, available at: http://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm (accessed on 24 August 2023).

1589 See at: https://repository.mines.edu/bitstream/handle/11124/176887/Payne-Institute-Student-Commentary-Chinas-Consolidation-of-Rare-Earth-Elements-Sector.pdf (accessed on 24 August 2023).

1590 Likely MIIT, NDRC, and Ministry of Natural Resources.

implementation in the previous year. The quota will be published after approval by the State Council. The proposed draft regulations also envisage that the government may adopt measures to restrict or suspend rare earth mining, smelting, and separation, if it is necessary to protect natural resources and the ecological environment[1591].

Most of the quota is allocated among six major SOEs: China Minmetals, CHALCO, China Northern Rare Earth Group High-Tech, Xiamen Tungsten, China Southern Rare Earth Group and Guangdong Rare Earth Industry Group. The quota is normally distributed by them across their provincial affiliated SOEs, who will then allocate quotas to lower level SOEs, private firms or Chinese-foreign joint ventures.

In December 2021, China Rare Earth Group Co. Ltd was formally established. It is a conglomerate of several big industrial producers, including the rare earth units of three major above-mentioned SOEs (namely CHALCO, China Minmetals, and Ganzhou Rare Earth Group Co., Ltd.[1592]) – each of these three entities holding more than 20% of China Rare Earth Group's shares – and two research companies (China Iron & Steel Research Institute Group and Grinm Group Corporation Ltd.), each holding 3.9% of the shares[1593]. Based on 2021 data, the China Rare Earth Group Co. Ltd had around 30% of both the mining and the smelting and separation quotas[1594]. This SOE is directly supervised by SASAC that has more than 31% of China Rare Earth Group's shares.

China has raised the annual quota for five years in a row. In 2022[1595], the rare earth mining quota was 210 000 tonnes (increased by 25% comparing with 168 000 tonnes in 2021 and doubled comparing to 105 000 tonnes in 2017[1596]): 100 800 tonnes in the first batch and 109 200 tonnes in the second batch. The quota for the smelting and separation of rare earth in 2022 was 202 000 tonnes (increased by 25% comparing with 162 000 tonnes in 2021 and more than doubled comparing with 100 000 tonnes in 2017[1597]): 97 200 tonnes in the first batch and 104 800 tonnes in the second batch[1598].

1591 Chinatrademonitor (2021). *China Proposes Rules to Regulate Rare Earth Production*. 31 January 2021, available at: https://www.chinatrademonitor.com/china-proposes-rules-to-regulate-rare-earth-production/ (accessed on 24 August 2023).

1592 China Southern Rare Earth Group is a key subsidiary of Ganzhou Rare Earth Group.

1593 *China Merges Three Rare Earths State-Owned Entities to Increase Pricing Power and Efficiency*, 12 January 2022; available at: https://www.china-briefing.com/news/china-merges-three-rare-earths-state-owned-entities-to-increase-pricing-power-and-efficiency/ (accessed on 24 August 2023).

1594 *Ibid.* 52 719 metric tons of mining quota (31% of the total) and 47 129 metric tons of smelting quota (29% of the total).

1595 2022 first batch, see at: https://www.miit.gov.cn/jgsj/ycls/gzdt/art/2022/art_d1f7f30b71314d8b9f11f2cd01b39c81.html (accessed on 24 August 2023) and 2022 second batch, see at: https://www.miit.gov.cn/jgsj/ycls/xt/art/2022/art_c663540f8ae24fb28fa88fab41cb1386.html (accessed on 24 August 2023).

1596 The rare earth mining quota was 140 000 tonnes in 2020, 132 000 tonnes in 2019, 120 tonnes in 2018.

1597 The quota for the smelting and separation of rare earth was 135 000 tonnes in 2020, 127 000 tonnes in 2019, 115 tonnes in 2018.

1598 Reuters (2022). *China hikes 2022 rare earth quota by 25% on rising demand*. 17 August 2022, available at: https://www.mining.com/web/china-hikes-2022-rare-earth-quota-by-25-on-rising-demand/ (accessed on 24 August 2023).

In March 2023, MIIT announced[1599] that in the first batch of 2023 the rare earth mining quota is 120 000 tonnes and the quota for smelting and separation of rare earth is 115 000 tonnes[1600] (both increased by 20% comparing with the first batch of 2022). The production quota was divided between four major rare earth companies: China Northern Rare Earth Group, China Rare Earth Group, Xiamen Tungsten and Guangdong Rare Earths Industry Group[1601].

12.9. INVESTMENT REGULATION

One of the instruments to influence the level of supply is the steering of investment activities by the government as explained in more detail in the investment chapter (see Chapter 8).

The government limits investment into a number of sectors related to raw materials. According to the Notice of the State Council on Promulgating the Catalogue of Investment Projects Subject to Government Verification and Approval[1602] (see Section 8.3.9.1):

- Crude oil or natural gas (including coalbed methane) development projects shall be independently decided by enterprises with exploitation rights and be reported to relevant industry management departments of the State Council for record-filing. Relevant enterprises with exploitation rights shall adhere to the principle of overall planning pursuant to applicable laws and regulations [...];
- Projects of iron and steel, electrolytic aluminium, cement, flat glass, vessels and other industries with serious overcapacity shall be strictly governed by the Guiding Opinions of the State Council on Addressing the Conflicts Caused by Serious Industry Overcapacity [...]. All regions and departments shall not process the record-filing of any project that adds new capacity in any other name or by any means;
- Coal mine projects shall be strictly governed by the Opinions of the State Council on Resolving Overcapacity on the Coal Industry and Achieving Turnaround in Development [...]. In other words, the examination and approval of new coal mine projects, technological transformation projects that increase capacity and capacity verification and increase projects shall, in principle, be suspended for three years with effect from 2016. [...]

China regulates foreign investment by using various legal tools, in particular negative lists of sectors in which foreign investment is either prohibited or restricted (see Section 8.3). According to the lists applicable as of writing of this Report, foreign investment is prohibited in exploration, mining, and mineral processing (beneficiation) of rare earths, radioactive

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1599 2023, first batch, see at: https://www.miit.gov.cn/jgsj/ycls/wjfb/art/2023/art_cfcef0279a2a4fe0938691a3ac1b1e3e.html (accessed on 24 August 2023).

1600 Global Times (2023). *China hikes rare-earth quota by nearly 20% amid rising demand*. 24 March 2023, available at: https://www.globaltimes.cn/page/202303/1287914.shtml (accessed on 24 August 2023).

1601 YiCai Global (2023). *China Northern Rare Earth Group Keeps Top Position as MIIT Releases First Quota List*. 27 March 2023, available at: https://www.yicaiglobal.com/news/china-northern-rare-earth-group-keeps-top-position-as-miit-releases-first-quota-list (accessed on 23 August 2023).

1602 Notice of the State Council on Promulgating the Catalogue of Investment Projects Subject to Government Verification and Approval of 20 December 2016, available at: https://www.gov.cn/zhengce/content/2016-12/20/content_5150587.htm (accessed on 23 August 2023).

minerals, and tungsten. The Special Administrative Measures for Foreign Investment in Pilot Free Trade Zones (see Section 8.3.1) additionally specify that it is forbidden without permission to enter rare earth mining areas or obtain mine geological data, ore samples and production technology.

Since 2017 annual revisions of the negative list for access of foreign investment contributed to progressively lowering the scope of restrictions affecting foreign investments[1603]. However, investment restrictions with regard to investment projects relating to raw materials have an impact on the structure of whole industry.

Another tool of regulation of foreign investment is the Encouraged FI Catalogue (see Section 8.2.3.1.2). Foreign investors investing in the industries included in this catalogue are entitled to certain preferential policies at the local government level, such as a discount of up to 70% on the land price, exemption from duties on imported equipment or a 15% income tax rate (compared with 25% in other industries)[1604]. The version of the catalogue[1605] applicable as of writing of this Report encourages on the national level foreign investment, for example, in:

- low-carbon upgrade of petrochemical chemical raw materials;
- raw materials manufacturing (high-purity electronic chemicals, high-performance coatings and organic polymer materials were added or modified in the 2022 catalogue edition);
- production of fluorine resource recovery from phosphorus chemical industry and aluminium smelting;
- exploration and development of oil and natural gas (including shale gas and coal bed methane) and utilization of mine gas;
- exploration, mining and mineral processing of minerals in short supply (such as potash, chromite, etc.).

Additionally, in certain regions foreign investment is encouraged, for example, in:

- ecosystem restoration and reconstruction projects in mining areas (Shanxi, Heilongjiang, Tibet Autonomous Region);
- production of fully mechanized mining equipment and explosion-proof electromechanical products in large coal mines (Shanxi);
- exploration and mining of seabed minerals (Hainan);
- exploration, mining and mineral processing, development and application of shale oil and gas technology (Chongqing, Sichuan);
- wood processing (Jilin, Gansu); wood processing and wood product production (Heilongjiang);

1603 OECD Services Trade Restrictiveness Index (STRI). China 2022; available at: https://www.oecd.org/trade/topics/services-trade/documents/oecd-stri-country-note-chn.pdf

1604 ICLG. *Mining Laws and Regulations in China 2023*, available at: https://iclg.com/practice-areas/mining-laws-and-regulations/china (accessed on 23 August 2023).

1605 The Catalogue of Encouraged Industries for Foreign Investment (2022 edition), available at: https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/202210/t20221028_1339662.html?code=&state=123 (accessed on 23 August 2023).

- development and application of new short-process iron and steel smelting technology (Gansu, Guizhou); development and application of non-blast furnace smelting technology (direct reduction method) (Guizhou).

As already noted in Chapter 8, for some industries included in the negative lists – or even into the catalogue of encouraged industries – there may still be approvals that foreign investors need to secure from relevant Chinese authorities (see Section 8.3.1)[1606]. Namely, foreign investment in sectors not included in the foreign investment negative lists may be subject to the restrictions set in the MA Negative List (see Section 8.3.9.1) which applies to both domestic and foreign investors. For example, it prohibits, without a license or relevant qualifications, engagement in mineral resource exploration and mining, production and operation, and foreign cooperation, or, without permission, investment in the construction of specific raw materials (rare earths, iron ore and non-ferrous metals, gold, petrochemicals, coal) projects.

12.10. CHAPTER SUMMARY

China uses of a broad range of instruments allowing it to significantly influence the prices of raw materials. By artificially increasing or decreasing the level of raw materials supply, or simply by centrally setting the prices, the government can steer the prices upwards or downwards.

The dense web of plans – including plans at the national, sectoral, provincial and municipal level – regulates basically every aspect of the Chinese economy and sets specific targets. In accordance with such plans, many key raw materials and other material inputs are to some extent regulated and are the targets of government intervention (see Section 12.2).

Other instruments applied in the plans which allow the Government to influence the supply level as well as the industry in general include, but are not limited to: increasing supply of raw materials by setting detailed minimum production targets, decreasing supply by setting maximum targets, prescriptions over overcapacity e.g. by blocking new investment projects, interventions of the State into the structure of enterprises (mergers and acquisitions to create large enterprises), central management of the geographic distribution of industries and transfers, and various extensive support measures (financial and other).

Secondly, the Government can influence prices by introducing different sorts of impediments to export. By limiting the quantities of raw materials exported abroad, the domestic supply is kept artificially high, leading to lower prices, constituting a benefit for the domestic producers of downstream products. Export restrictions are described in detail in Section 12.3.3.

Thirdly, the Government has the capacity to set prices of certain goods centrally. Even though the list of centrally set prices has to a great extent been reduced, the government is still intervening in cases where the prices run counter to government policies.

Stockpiling is another instrument allowing the State to significantly influence the domestic – and in some cases the global – raw material prices. Section 12.5 addresses the stockpiling of

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1606 China Briefing. *China's 2019 Negative Lists and Encouraged Catalogue for Foreign Investment*. 10 July 2019, available at: https://www.china-briefing.com/news/chinas-2019-negative-lists-encouraged-catalogue-foreign-investment/ (accessed on 23 August 2023).

certain metals, including copper and nickel, as well as cotton and agricultural commodities, and the major impact those reserves have on domestic and global prices. However, detailed information on stockpiling is not made public.

Section 12.6 describes how the stockpiling and the interventions by the Government benefit the domestic producers due to the distortions of the Shanghai Futures Exchange benchmark prices.

Section 12.7 demonstrates that the industries relevant to the production of raw materials are to a large extent served by SOEs.

Finally, Section 12.9. shows that the State is guiding investments in the sectors examined. For some sectors there are investment restrictions, while for many sectors the government encourages investments. The State can back-up these restrictions and encouragements in a variety of ways, notably by granting (or refusing) financial support and when reviewing the various permits. All this allows the government to artificially influence the supply of specific goods.

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13.1. INTRODUCTION

Historically, the Chinese workforce was highly segmented, both on the geographic as well as the sectoral level. Workers were assigned to a geographic location by the *hukou* system and to a specific workplace through the '*danwei*' for urban residents and brigades ('*dadui*') for rural residents. The Chinese pre-reform employment system was clearly isolated from any market forces, with employees assigned to an SOE for a lifetime and wages set by the government. The centrally planned economy system also required a different institutional setting.

The first reforms to the system fully controlled by the State were introduced in the 1980s, and in the intervening years, the Chinese labour system has evolved, giving more rights to workers with respect to compensation and choice of employment. However, remnants of the old system are still in place, such as the *hukou* system having an impact on the mobility of workers and their access to social protection, lack of the explicit right to strike, as well as the lack of freedom of association and independent collective bargaining. Furthermore, recently there is evidence that state-imposed forced labour is playing an important role in some regions of the country. All of these factors will be further analysed below.

13.2. LABOUR LAW

China abandoned the so-called 'iron rice bowl' cradle-to-grave social security system in the 1980s. The main labour regulations in China include the Labour Law (promulgated in 1994, last amended in 2018), as well as a set of three laws promulgated in 2007: Labour Contract Law

(amended in 2012), Employment Promotion Law (amended in 2015), and Labour Disputes Mediation and Arbitration Law.

Other sources of labour law include:

- Law on Assemblies, Processions and Demonstrations (1989, amended in 2009), issued by the Standing Committee of the National People's Congress, and its implementing regulations (1992, amended in 2011);
- Regulations on the Composition of Gross Wages (1990);
- Trade Union Law (1992, last amended in 2021);
- Circular on Several Issues Relating to Strengthening the Work of Trade Unions in Enterprises with Foreign Investment (1994);
- Interim Provisions on the Payment of Wages (1994);
- Provisions of the State Council on Working Hours of Employees (1994, amended in 1995);
- Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used (2002),;
- Regulations on Labour Security Supervision (2004);
- Provisions on Minimum Wages (2004);
- Regulations on Work-Related Injury Insurance (2003, amended in 2010);
- Social Insurance Law (2010, amended in 2018);
- Special Provisions on Labour Protection of Female Workers (2012);
- Opinions of the Ministry of Labour and Social Security on Several Issues concerning the Implementation of the Regulations on Work-related Injury Insurance (2004).

13.3. INTERNATIONAL LABOUR STANDARDS

International labour standards are legal instruments drawn up by the International Labour Organization's ('*ILO's*') tripartite constituents (governments, employers and workers) and setting out basic principles and rights at work. They are either conventions, which are legally binding, international treaties that may be ratified by ILO's member States, or recommendations, which serve as non-binding guidelines. Conventions and recommendations are drawn up by representatives of governments, employers and workers and are adopted at the ILO's annual International Labour Conference. Once a standard is adopted, member States are required under the ILO Constitution to submit them to their competent authority (normally the parliament) for consideration. In the case of conventions, this means consideration for ratification. If it is ratified, ratifying countries commit themselves to applying the convention in national law and practice and to reporting on its application at regular intervals.

The ILO has identified 11 instruments as fundamental, i.e. covering subjects that are considered as fundamental principles and rights at work:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87);
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98);
- Forced Labour Convention, 1930 (No. 29) and its 2014 Protocol;
- Abolition of Forced Labour Convention, 1957 (No. 105);

- Minimum Age Convention, 1973 (No. 138);
- Worst Forms of Child Labour Convention, 1999 (No. 182);
- Equal Remuneration Convention, 1951 (No. 100);
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111);
- Occupational Safety and Health Convention, 1981 (No. 155);
- Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

Out of the 28 conventions ratified by China, 22 are in force, three have been automatically denounced, two have been abrogated and one instrument has been withdrawn by the ILO decisions[1607]. Out of the 11 fundamental instruments, China ratified seven: the Equal Remuneration Convention in 1990, the Minimum Age Convention in 1999, the Worst Forms of Child Labour Convention in 2002, the Discrimination (Employment and Occupation) Convention in 2006, the Occupational Safety and Health Convention in 2007, the Forced Labour Convention and the Abolition of Forced Labour Convention in 2022. Correspondingly, China has not ratified four: the Freedom of Association and Protection of the Right to Organise Convention, the Right to Organise and Collective Bargaining Convention, the 2014 Protocol to the Forced Labour Convention and the Promotional Framework for Occupational Safety and Health Convention[1608].

Freedom of association and the right to organise and collective bargaining are of special importance to examine the existence of a labour market with equal rights attributed to employers and employees.

13.4. 14TH FYP ON BOOSTING EMPLOYMENT

The 14th FYP on boosting employment[1609], issued by the State Council in August 2021, provides that labour should be subject to market forces and government intervention at the same time: "*Adhere to the dominant role of the market and the regulatory role of the government. Foster a better combination of an efficient market with a capable government; Not only stick to the trend of a more market-oriented and society-oriented employment, speed up the removal of institutional and systemic barriers restricting employment, and give full play to the decisive role of the market in allocating labour resources, but also strengthen the government's responsibilities and optimise and integrate various types of resources, so as to duly provide employment promotion with a strong policy support and basic services.*" Furthermore, the plan sets various objectives to be reached by 2025, e.g.: "*Overall stabilisation of employment trends: create over 55 million urban jobs; strive to effectively expand employment still further; keep the urban surveyed unemployment rate under 5.5%; keep the employment rate of key categories stable. Gradually narrow the employment opportunities' gap between urban and rural areas*

1607 For a detailed list see: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200_COUNTRY_ID:103404 (accessed on 22 August 2023).

1608 See at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:10011:0::NO::P10011_DISPLAY_BY,P10011_CONVENTION_TYPE_CODE:1,F (accessed on 24 May 2023).

1609 The State Council on issuance: Notice of the 14th FYP for Employment Promotion, available at: http://www.gov.cn/zhengce/content/2021-08/27/content_5633714.htm (accessed on 12 June 2023).

as well as between regions; ensure the fundamental balance of supply and demand on the labour force market."

13.5. WAGES AND BENEFITS

Minimum wages

An important instrument in China designed to influence wage trends in labour markets and ensure basic job-quality standards, especially for workers in a weak bargaining position, is the local minimum wage[1610]. China first introduced provisions on minimum wages in 1993 in the Provisions on Minimum Wages in Enterprises, with additional provisions in the 1994 Labour Law, the 2004 Provisions on Minimum Wages and 2007 Ministry of Labour and Social Security Notice on Further Developing the Minimum Wage System[1611]. In accordance with the Labour Law, the State has to implement a system of guaranteed minimum wages. The minimum wages shall be determined by the governments of provinces, autonomous regions or municipalities directly under the Central Government and reported to the State Council for the record. The Labour Law requires that wages paid to the labourers by employing units should not be lower than the local standards of minimum wages[1612].

Minimum wages in different regions are determined and adjusted with reference to the following factors: (i) living expense; (ii) the average wage level in the society; (iii) labour productivity; (iv) employment situation; and (v) different levels of economic development between regions[1613].

Minimum wages vary considerably across different regions. There is no national minimum wage floor in China and minimum wage levels are set by local governments only. Statistics in 2019 showed that the minimum wage was 65% higher in Shanghai, where the rate is highest, than in Qinghai, where it is lowest. In addition, although there is only one minimum wage rate in Beijing, Shanghai, Tianjin and some other provinces, in the majority of the provinces there are multiple minimum rates, for example, there are 5 different rates covering 21 municipalities in Guangdong[1614]. More recent statistics confirm this picture, with the 2022 Shanghai minimum wage rate remaining the highest among provinces, significantly exceeding the minimum wages in the provinces with the lowest rates, namely Heilongjiang (Shanghai minimum wage being some 85% higher), as well as Xinjiang and Jilin (Shanghai minimum wage some 75% higher)[1615]. Similarly, most provinces maintain a system in which different classes of minimum

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1610 There are also wage guidelines; however, their role is unclear and they will not be discussed further: "*A second issue is the role of wage guidelines, which are based on surveys that often do not fully represent the local labor market, and in any event, play an unclear role in the discussions over wages at the firm level.*" See World Bank and the Development Research Center of the State Council, P. R. China. (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, page 323.

1611 2007 Ministry of Labour and Social Security Notice on Further Developing the Minimum Wage System was repealed in 2017 by the Ministry of Human Resources and Social Security.

1612 Labour Law of the PRC, Art 48, available at: https://www.gov.cn/banshi/2005-05/25/content_905.htm (accessed on 12 June 2023).

1613 *Ibid.*, Art 49.

1614 ILO Global Wage Report 2020-2021, available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_762534.pdf (accessed on 12 June 2023).

1615 See China Salary and Wages (2024), available at: hthttps://www.china-briefing.com/doing-business-guide/china/human-resources-and-payroll/minimum-wage (accessed on 1 March 2024).

wage levels exist for different areas based on the level of development and cost of living in that region[1616].

Real wages

Between 2008 and 2019, real wages more than doubled in China[1617]. Between 2008 and 2022 real wage growth in China was highest among all G20 countries: in 2022 real monthly wages were equivalent to about 2.6 times their real value in 2008[1618]. Wages in the monopoly sectors (usually SOE dominated) were higher than in the competitive sectors[1619]. It has been argued that the wage premiums of SOEs reflect the underlying distortions in the operating environment of the enterprise and are not justifiable on grounds of efficiency or equity[1620]. Recruitment as well as salaries in SOEs are not market-led, but rather follow the remnants of the former system. The Explanatory Notes for the Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform included provisions on improving SOEs policies with regard to labour: "[…] *SOEs should appropriately increase the proportion of market-oriented recruitment, and rationally determine and strictly regulate the salary standards, position benefits, position related expenses and business spending of SOE management personnel*"[1621]. The SOE wages reform, effective as from January 2019, introduced more flexibility and linked salaries to company's performance. The legal basis are the two documents issued by the State Council and State-owned Assets Supervision and Administration Commission: Opinions on Reforming the Mechanism for Determining Wages in State-owned Enterprises[1622] and Administrative Measures for Gross Wages Distributed by Central Enterprises[1623].

Labour contracts

Data vary on the extent Chinese workers benefit from contracts. Chinese authorities report that over 90% of enterprise employees have signed labour contracts in 2019[1624]. However, the signing rate of labour contracts was much lower for rural migrant workers. Based on the '2016 *Survey Report of Chinese Rural Migrant Workers'* published by the National Bureau of Statistics in April 2017, only 35.1% of rural migrant workers in China signed labour contracts

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1616 *Ibid.*

1617 ILO Global Wage Report 2020-2021.

1618 ILO Global Wage Report 2022-2023, available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_862569.pdf (accessed on 12 June 2023).

1619 World Bank and the Development Research Center of the State Council, P. R. China. (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, p. 320.

1620 *Ibid.*, p. 325.

1621 Explanatory Notes for the Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform, available at: http://www.china.org.cn/china/third_plenary_session/2014-01/16/content_31210122.htm (accessed on 12 June 2023).

1622 Available at: http://www.gov.cn/zhengce/content/2018-05/25/content_5293656.htm (accessed on 13 June 2023).

1623 Available at: http://www.sasac.gov.cn/n2588035/n2588320/n2588335/c20166687/content.html (accessed on 13 June 2023).

1624 See Ministry of Human Resources and Social Security's 2019 Report, available at: http://www.MOHRSS.gov.cn/SYrlzyhshbzb/zwgk/szrs/tjgb/202006/W020200608534647988832.pdf (accessed on 13 June 2023).

in 2016, a 1.1% drop compared to 2015[1625] -- thus, most rural migrant workers were not legally entitled to the minimum wage nor covered by China's labour laws. By contrast, according to a joint report by the World Bank and the Chinese State Council, almost all formal and informal workers in urban areas – whether migrant or local – received labour income above the city-level minimum wage around the same period[1626].

Average labour taxation in China (45% marginal rate on income above RMB 80 000/month[1627]) is much higher than in other countries in the East Asian region and still higher than in most OECD countries. This leads low-income workers to avoid formal employment or to 'selective formalisation' of employment contracts in the formal sector[1628]. Research in 2010 shows that having a labour contract is associated with wages that are 11% lower (due to social contributions, taxes etc.). Therefore, rural migrant workers as well as employers might have a preference to stay in the grey zone in order to receive higher wages[1629]. A later OECD economic survey, however, finds that rural workers having a labour contract are associated with higher wages, so the trend may have changed[1630].

However, the fact that many migrant workers (who constitute more than 33% of China's total workforce[1631]) have no labour contract, and are thus not covered by social protection insurance, constitutes a significant cost advantage for their employers.

13.6. COLLECTIVE BARGAINING OF WAGES BETWEEN LABOUR AND ENTERPRISES

As the level of wages is an important factor in the determination of the total cost of production, it is vital to establish whether wage levels are undistorted. Market based wages should be understood as wages freely bargained between the workers and management in an undistorted economic environment. In China collective bargaining is not organized by trade unions and is mainly a mechanism that enables workers to enjoy the basic legal rights, although it may also

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1625 Survey Report of the Chinese Migrant Workers 2016, available at: https://www.gov.cn/xinwen/2017-04/28/content_5189509.htm#1 (accessed on 12 June 2023).

1626 World Bank and the Development Research Center of the State Council, PRC (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, p. 324.

1627 See Individual Income Tax Law of the People's Republic of China (1980, last amended in 2018), available at: http://www.npc.gov.cn/npc/c30834/201809/d794583352034bd0b15e5d6f638f6a0b.shtml (accessed on 15 June 2023).

1628 World Bank and the Development Research Center of the State Council, PRC (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, p. 328.

1629 Gallagher, M., Giles, J., Park, A. and Wang, M. (2014). *China's 2008 Labour Contract Law: Implementation and implications for China's workers*. Human Relations, 68(2), pp.197-235, pp. 223-224.

1630 OECD (2017), *OECD Economic Surveys: China 2017*, p. 117, available at: *http://dx.doi.org/10.1787/eco_surveys-chn-2017-en* (accessed on 15 June 2023).

1631 According to the '2021 Survey Report of Rural Migrant Workers' issued by the National Bureau of Statistics, in 2021, the total number of rural migrant workers in China stood at 292.51 million, up 2.4 percent y-o-y. A more recent analysis put the number of rural migrant workers at 295.6 million, thereby making up 33.7% of the total workforce counting 876 million, available at: https://clb.org.hk/en/content/migrant-workers-and-their-children (accessed on 19 June 2023). According to the World Bank, the workforce as of 2021 was about 780 million, available at: https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=CN (accessed on 19 June 2023).

win workers certain benefits beyond the law. Moreover, the practice of collective bargaining is not geographically uniform and depends on local conditions[1632].

Legal basis

In accordance with the Labour Law of 1994 and the Trade Union Law of 1992, a trade union may represent workers in negotiating and signing a collective contract with the enterprise on matters relating to labour remuneration, working hours, rest and vacations, occupational safety and health, insurance and welfare.

The 1992 Trade Union Law was the first law concerning collective negotiations, followed by the 1994 Labour Law, the 1994 and 2004 Provisions on Collective Contracts, the 2000 Interim Measures for Collective Wage Consultation, the 2006 Comments Regarding the Development of Regional and Industry-based Collective Consultations, the 2007 Labour Contract Law, the 2009 ACFTU Guide on Actively Carrying Out Industrial Collective Wage Consultations, and the 2011 Provisions on Enterprise Labour Dispute Negotiation and Mediation.

The 2007 Labour Contract Law requires employers to consult with trade unions or workers' representatives in making decisions on such matters as dismissal and redundancy (Article 41) and also in drafting or revising work and company rules (Article 4). Furthermore, the provisions on collective contract negotiations give the employees of the enterprise the right to negotiate on an equal basis with the enterprise regarding matters relating to labour remuneration, working hours, rest and vacation, occupational safety and health, insurance and welfare (Article 51).

CCP leadership

China's trade unions are subject to the leadership of the CCP. According to Article 4 of the Trade Union Law, "*Trade unions shall* […] *uphold leadership by the Communist Party of China* […]" The Constitution of the Chinese Trade Unions (amended in 2018) also clearly states in its General Principles that "*Chinese trade unions are mass organizations of the working class under the leadership of the Communist Party of China, formed by the workers and staff members on a voluntary basis*", and in Article 32 that "*trade union cadres shall:* […] *(2) execute the basic lines, guidelines and policies of the Party* […][1633]". In addition, the nomination and selection of the chairperson, vice-chairperson and committee members of the trade union must be approved by the Party organization at the same level.[1634]

Article 4 of the Trade Union Law further stipulates that: *"Trade Unions shall comply with and protect the Constitution* […] *stick to the socialist line,* […] *stick to the Chinese Communist Party's leadership, stick to the Marxist-Leninist theory of Deng Xiaoping, stick to the reform and opening up policy, and develop their work independently in accordance with the Constitution of the Chinese Trade Unions".* The Constitution of the Chinese Trade Unions

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1632 Chloé Froissart (2017). *Negotiating authoritarianism and its limits: Worker-led collective bargaining in Guangdong Province*, p.4-5, available at: https://www.researchgate.net/publication/321227386_Negotiating_authoritarianism_and_its_limits_Worker-led_collective_bargaining_in_Guangdong_Province (accessed on 15 June 2023).

1633 See Constitution of the Chinese Trade Unions, available at: https://www.acftu.org/jgsz/ghzc/202009/t20200907_328474.html (accessed on 15 June 2023).

1634 See Regulations on Election of Basic-level Trade Union Organizations, ACFTU, 9 October 2016, available at: https://www.acftu.org/ghjj/ghjczzjs/zdwj/202011/t20201116_730378.html (accessed on 15 June 2023).

mentioned in the Article 4 above stipulates in its Preamble: *"General Principles: Chinese trade unions* [...] *are the Party's bridges and ties to the employees' mass, they are the main social pillar of the State power", "Chinese trade unions do consciously accept the Chinese Communist Party's leadership, they fulfil the political responsibility to gather and guide the working class to listen to the Party's word and follow the Party's policy" and "Chinese trade unions safeguard the socialist state authority, as led by the working class and based on the alliance of workers and peasants. They support the People's Government's work and ensure democratic participation and social supervision in accordance with law."*[1635]

Finally, the CCP also intends to further strengthen its leadership over trade unions, as set out by the CCP Central Committee in its 2019 Opinions on Strengthening and Improving the Party Building in Central and State Organs: "*Section VI: Keep improving the Party's work among masses. Article 19: Fully use mass organisations as bridges and connections:* [...] *Organs' Party Committees shall support the administration's Party groups (Party Committees) to strengthen their leadership over organs' trade unions, the Communist Youth League, Women organisations and other mass organisations.*"[1636]

All-China Federation of Trade Unions

All-China Federation of Trade Unions ('*ACFTU*'), officially founded in 1925, is China's only legally recognised trade union at the national level. Article 2 of the Trade Union Law[1637] provides that "*the All-China Federation of Trade Unions and all the trade union organizations under it represent the interests of the workers and staff members and safeguard the legitimate rights and interests of the workers and staff members according to law.*' Moreover, according to Article 12: '*the establishment of basic-level trade union organizations, local trade union federations, and national or local industrial trade union organizations shall be submitted to the trade union organization at the next higher level for approval.*" Since "*a trade union organization at a higher level shall exercise leadership over a trade union organization at a lower level*" (Article 10), ACFTU ultimately leads all legally recognized trade unions. For example, the establishment of a trade union and certain major matters – such as selection of its chairperson and vice-chairperson and committee members, and dissolution – are subject to approval by the higher-level organisation.

As of writing of this Report, ACFTU, according to official figures, has around 314 million members and more than one million full-time officials[1638]. According to some sources, those numbers may not reflect the actual situation -- exaggerating the real bargaining power of the

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1635 See Constitution of the Chinese Trade Unions, available at: https://www.acftu.org/jgsz/ghzc/202009/t20200907_328474.html (accessed on 15 June 2023).

1636 See CCP Central Committee's 2019 Opinions on Strengthening and Improving the Party Building in Central and State Organs, available at: https://www.gov.cn/zhengce/2019-03/28/content_5377892.htm (accessed on 15 June 2023).

1637 See Trade Union Law of the PRC, available at: http://www.mohrss.gov.cn/xxgk2020/fdzdgknr/zcfg/fl/202011/t20201102_394624.html (accessed on 15 June 2023).

1638 See China Labour Bulletin – Supporting the workers' movement in China, available at: https://clb.org.hk/en/content/about-us (accessed on 15 June 2023); see also Partners of Friedrich Ebert Stiftung, available at: https://china.fes.de/partners (accessed on 15 June 2023).

unions, and they are more likely to be the result of the local unions' competition to report the achievement of membership target numbers rather than of genuine trade union organising[1639].

According to the ILO Convention 87, to which China is not a signatory, all workers should have the right to establish and join organisations of their own choosing (Article 2) and elect their representatives in full freedom (Article 3(1)), and public authorities should refrain from any interference which would restrict this right (Article 3(2)). Moreover, the ILO Declaration on Fundamental Principles and Rights at Work commits all ILO member states to respect the main ILO principles and rights at work, including freedom of association[1640]. As noted above, however, ACFTU-affiliated trade unions are the only trade unions recognised by the State, and their leadership is subject to approval by the Party and by the next higher level trade union organization. Therefore, some observers see ACFTU as part of the Chinese state and not a voluntary association of workers as set out in ILO Convention 87[1641].

The Trade Union Law also provides a legal basis for tripartite and bipartite consultations at various levels to address labour issues. Tripartite Consultation Committees have been established across China. They consist of representatives of the local government, the local ACFTU-affiliated trade unions, and the local branches of the China Enterprise Confederation ('*CEC*') and China Enterprise Directors Association ('*CEDA*') (who together represent the interests of enterprises). The CEC and CEDA are the only officially designated employers' organisations at the national level in China. The aim of these consultations is to improve coordination among the three parties. Given the official status of each of the parties involved in the tripartite consultations, in the literature the consultation process has been described as a 'multi-headed monologue'[1642]. However, there are also signs of growing divergence among the three parties[1643].

Right to strike

The freedom of association and the right to strike are fundamental conditions to arrive at equitable labour market outcomes[1644]. But whether Chinese workers have the right to strike is a debatable point. Since the right to strike was removed from the Chinese constitution in 1982, no other laws or regulations have explicitly permitted such right. However, the Trade Union Law as well as some local regulations do recognize that work stoppages may occur under some circumstances. According to Article 28 of the Trade Union Law, "*In case of stoppage or slowdown in an enterprise or institution, the trade union shall, on behalf of the workers and*

1639 Lee, C.H. (2009). *Industrial relations and collective bargaining in China*. In: ILO Working Papers, p. 12.

1640 '*[A]ll Members, even if they have not ratified the Conventions in question, have an obligation arising from the very fact of membership in the Organization to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions, namely: (a) freedom of association and the effective recognition of the right to collective bargaining*; [...]' ILO Declaration on Fundamental Principles and Rights at Work and its Follow-up, Adopted by the International Labour Conference at its Eighty-sixth Session, Geneva, 18 June 1998 (Annex revised 15 June 2010), Article 2.

1641 *Lee,* C.H., *Brown*, W. and *Wen*, X. (2016). *What Sort of Collective Bargaining Is Emerging in China*?, British Journal of Industrial Relations, pp 214-236, p. 233.

1642 Lee, C.H. (2009) *Industrial relations and collective bargaining in China*. In: ILO Working Papers, p. 9.

1643 *Ibid.*

1644 *Ibid.*

staff members, hold consultation with the enterprise or institution or the parties concerned, present the opinions and demands of the workers and staff members, and put forth proposals for solutions."

On the local level, the Shenzhen legislature, for example, passed and amended regulations on the promotion of harmonious labour relations in 2008 and 2019, which essentially mirror the provisions of the Trade Union Law on this issue. The absence of official recognition of the right to strike, however, deprives the workers of an important instrument of collective pressure in a deadlock situation, further weakening their position[1645].

With respect to freedom of association, Article 35 of the Constitution explicitly provides for freedom of assembly and association. However, as described above, such freedom is de facto not available to employees wishing to create their own workers representation, and the Trade Union Law requires them to turn to ACFTU.

In February 2016 the International Trade Union Confederation filed a complaint at the ILO Committee on Freedom of Association against the Chinese Government following the detention of labour activists in a coordinated police action in Guangdong in December 2015. The interim report of 2016 stated that the activists "*appear to have been arrested, detained and charged for being involved in a labour dispute and considers that the detentions of persons connected with their activities in defence of the interest of workers constitutes a serious interference with civil liberties in general and with trade union rights in particular*".[1646] In 2023, the issue was still pending, with the interim report stating that: *"The Committee expresses its concern that the facts of this case, under examination since October 2016, indicate a systemic problem which has been seen to have had an impact on workers' freedom of association by virtue of the numerous persons arrested, disappeared, and intimidated for having tried to defend workers' collective interests and for whom the Government has consistently failed to provide the detailed information requested by the Committee, including as to whether charges are still pending against any of the labour activists and on the steps taken to ensure complete respect for freedom of association. In light of the persistent failure by the Government to provide detailed information on the above and to take steps to address the Committee's long-standing recommendations, the Committee finds itself obliged to draw the Governing Body's attention to the serious and urgent nature of this case."* [1647]

The ILO Committee on Freedom of Association found in a number of instances that even though there are provisions in the constitution guaranteeing freedom of association, many provisions of the Trade Union Law were contrary to the fundamental principles of freedom of association[1648] and thus the workers cannot take advantage of this formal right in practice.

1645 *Ibid.*

1646 See ILO Case No 3184, Report 380, para 236, available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:50002:0::NO::P50002_COMPLAINT_TEXT_ID:3302077 (accessed on 15 June 2023).

1647 Report No 404, October 2023, available at: https://www.ilo.org/dyn/normlex/en/f?p=1000:50002:0::NO:50002:P50002_COMPLAINT_TEXT_ID:4364370 (accessed on 1 March 2024).

1648 *Ibid.*, Case No 3184, Report 380, para 233; Case No. 2031, Report 321, para 165; Case No. 1652, 286 Report; Case No. 1930, Report 310.

Ineffectiveness of Chinese trade unions

Despite a number of written laws that have been promoting collective bargaining, a significant hurdle in the practical implementations of those provisions is the lack of a detailed legal framework and procedures[1649]. Another factor adding to the difficulty in collective bargaining is the fact that the gap in negotiating power of the enterprise and employee is very wide, with both the public and private enterprises having much more power than the employees[1650].

Historically, workers often have not turned for help to the union, because the unions have often been seen as relatively incompetent or incapable to act on the workers' behalf[1651]. A survey found that whether a union existed or not at the workplace did not make any difference in wages and other working conditions[1652].

Labour non-governmental organisations do not act on behalf of workers but rather pursue workers' psychological and practical empowerment and help them strategically frame their collective action[1653]. Since employers usually disregard workers' claims, they help workers design strategies to bring employers to the negotiation table. Workers find leverage in negotiations by making and breaking boundaries, striking a balance between pressure to counterbalance power relations and self-restraint to avoid repression[1654].

The ineffectiveness of unions has partly been due to their lack of independence. Deep incorporation of trade unions into the formal state structure gives the State direct control over trade unions[1655]. Trade union chair posts are occupied by senior party figures in SOEs or by managers in non-state enterprises. Even in companies consisting largely of unskilled workers, the trade union leadership usually comes from the higher management. Trade unions where leaders are actually managers cannot be effective in performing the role of workers' representation in enterprises[1656].

Nevertheless, even though trade unions under ACFTU historically served mainly as a transmission channel for state policy and as the administrators of welfare at the workplace, they have engaged in collective negotiations and become more effective in securing benefits such as higher wages, shorter working hours, and better insurance coverage in some localities[1657]. It seems that there is a slowly rising acceptance of ACFTU, as it has begun, at least at some local levels, to take a more progressive approach towards advocacy and started some attempts on

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1649 Brown, R. (2015). *Collective bargaining in China: Guangdong regulation a harbinger of national model?* China EU Law Journal, Volume 4, Issue 2, pp 135-154, p. 141.

1650 *Ibid.*

1651 Taylor, B. and Li, Q. (2007). *Is the ACFTU a union and does it matter?* Journal of Industrial Relations, Vol.49, No.5, p. 709.

1652 *Lee*, C.H., *Brown,* W. and *Wen,* X. (2016). *What Sort of Collective Bargaining Is Emerging in China?*, British Journal of Industrial Relations, pp 214-236, p. 221.

1653 Chloé Froissart (2017). *Negotiating authoritarianism and its limits: Worker-led collective bargaining in Guangdong Province,* p.4; available at: https://www.researchgate.net/publication/321227386_Negotiating_authoritarianism_and_its_limits_Worker-led_collective_bargaining_in_Guangdong_Province (accessed on 15 June 2023).

1654 *Ibid.*, p.7.

1655 Lee, C.H. (2009). *Industrial relations and collective bargaining in China*. ILO Working Papers. p. 16.

1656 *Ibid.*

1657 *Ibid.*, p. 17.

democratisation of union leadership[1658]. In order to increase its effectiveness, ACFTU issued new directives and committed funds of RMB 10 million to build the expertise of union negotiators, as well as set up negotiation committees throughout China to support collective negotiation activities[1659]. There are claims that in 2012 some 145 million workers were covered by 1 310 100 collective contracts countrywide covering 88.4% of all enterprises in the country[1660]. According to the official data, in 2017, 1.405 million comprehensive collective contracts had been signed across the country, covering 3 699 700 enterprises and 175 million employees; and 1 298 500 special wage contracts had been signed, covering 3 577 300 enterprises and 162 million employees[1661]. According to the Ministry of Human Resources and Social Security ('*MOHRSS*') in 2019, there were 1.75 million registered collective contracts covering 149 million workers[1662], and according to their 2020 report, 140 million employees were covered by collective contracts[1663].

Collective bargaining testifies to an organized solidarity that can be successful in changing the rules of the game in the workplace as well as the balance of political power. The limits of such collective bargaining are that they remain subject to the tolerance of and self-perceived interests of trade unions and local authorities, which is why they remain isolated experiments circumscribed at the enterprise level, with no immediate prospect of becoming systematized and institutionalized[1664].

13.7. LABOUR MOBILITY AND ITS IMPACT ON LABOUR COSTS

The development of the *hukou* system

Historically, China used to have a rigid household registration system which separated the population into the rural and urban areas. The household registration system, the so-called *hukou* system, largely divided the society between urban *hukou* holders with access to social security and public welfare and rural residents with access to land, but no or limited access to the social benefits outside of their formal registered birthplace as stated in the *hukou*.

The issuing of Regulations on Household Registration of the People's Republic of China in 1958 formally established the *hukou* system which restricted migrations between rural and urban areas and across regions. The system was modelled after the Soviet style internal passport

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1658 Brown, R. (2015). *Collective bargaining in China: Guangdong regulation a harbinger of national model?* China EU Law Journal, Volume 4, Issue 2, pp 135-154, p. 138.

1659 *Ibid.*

1660 *Ibid.*, p. 139 quoting 2012 Annual Human Resources and Social Security Enterprise Development Statistical Bulletin.

1661 See The China Trade Union news, available at: http://acftu.people.com.cn/n1/2018/1206/c67560-30446694.html (accessed on 15 June 2023).

1662 See the MOHRSS report, available at: http://www.mohrss.gov.cn/SYrlzyhshbzb/zwgk/szrs/tjgb/202006/W020200608534647988832.pdf (accessed on 15 June 2023).

1663 See the 2020 MOHRSS report, page 9, chapter IV, available at: http://www.mohrss.gov.cn/wap/fw/rssj/202106/W020210604378756386429.pdf (accessed on 15 June 2023).

1664 Chloé Froissart (2017). *Negotiating authoritarianism and its limits: Worker-led collective bargaining in Guangdong Province,* p.13; available at: https://www.researchgate.net/publication/321227386_Negotiating_authoritarianism_and_its_limits_Worker-led_collective_bargaining_in_Guangdong_Province (accessed on 15 June 2023).

and had the official objective of 'consolidation of the socialist system and public interests'[1665]. As described by the World Bank[1666]:

> [A]*nyone at birth should be registered in the locality where his or her mother is registered, and has little chance to change this registration locality in his or her entire life. In practice, residential movement across localities was controlled by the departments of public security. It was impossible for rural residents to move to cities without official approval. Labor mobility across sectors was planned by the departments of labour and personnel and no independent labour market was allowed. During the period from the 1950s to the onset of reform, the hukou system was strictly enforced and effectively prevented labour from migrating from rural to urban areas.*

Reforms since the late 1980s largely eliminated the mobility restriction function of *hukou*[1667]. In 1984, the government introduced a system of temporary residence permits that allowed rural *hukou* holders to move to cities. This resulted in more than 60 million migrants coming to cities in the first 10 years after the reform. The 12th FYP, released in 2011, for the first time specifically mentioned household registration reform in a standalone chapter on urbanization. The 'New Urbanisation Programme' was introduced at the 18th National Congress of the Communist Party of China in November 2012, and in July 2014 the State Council introduced a single national resident registration system (*jumin hukou*) for both rural and urban populations with a 100 million urban hukou conversion target by 2020[1668]. Though this target has been achieved, the achievement was offset by faster growth in migration, resulting in a much larger migrant population[1669]. While the 2020 census indicated that the number of migrant workers - defined as those without local household registration - had expanded to 376 million, from 155 million in 2010[1670], the latest available data for 2022 concerning rural migrant workers puts their number at 295.6 million (see Section 13.5). In March 2022, the NDRC issued the Key Tasks for New Urbanization and Urban-Rural Integrated Development with a new set of goals and targets to relax the *hukou* requirements. However, despite numerous attempts to reform the

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1665 Regulations on Household Registration in the PRC, 9 January 1958. Chan, K. W. and Zhang, L. (1999) *The Hukou System and Rural-Urban Migration in China: Processes and Changes*, Center for Studies in Demography and Ecology of the University of Washington, The China Quarterly 160 (1999): 818-855.

1666 World Bank (2005). *China - Integration of national product and factor markets : economic benefits and policy recommendations*, p.73., available at: http://documents.worldbank.org/curated/en/812981468025215645/China-Integration-of-national-product-and-factor-markets-economic-benefits-and-policy-recommendations (accessed on 15 June 2023).

1667 World Bank and the Development Research Center of the State Council, PRC (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, p. 330.

1668 See Opinions of the State Council on Further Promoting the Reform of the Hukou System, available at: http://www.gov.cn/zhengce/content/2014-07/30/content_8944.htm (accessed on 15 June 2023).

1669 See Knomad Policy Brief, available at: https://www.knomad.org/sites/default/files/2022-02/Policy%20Brief%2016_Internal%20Migration%20in%20China-Integrating%20Migration%20with%20Urbanization%20Policies%20and%20Hukou%20Reform-Nov_21.pdf (accessed on 15 June 2023).

1670 See Knomad Policy Brief.

hukou system, it seems that it is still hampering worker mobility and their access to social protection in China[1671].

As already mentioned above, reforms to the household registration system have been unable to keep up with the increasing number of rural migrants[1672]. Overall, the government has only made minor progress on the implementation of *hukou* reforms, not to mention that such initiatives were largely watered down by the local governments -- who were not willing to grant *hukous* to low-skilled migrants[1673].

The *hukou* system steering migration away from certain areas

The *hukou* registration system maintains the principle of population control and encourages rural migrants to settle down in smaller cities, keeping the criteria for gaining residency in the most popular destination cities for migrants still prohibitively strict[1674]. There are different rules on obtaining a *hukou* depending on the size of the city. The largest cities (*'megacities'*) have the most prohibitive rules, which gradually become less strict according to the size of the city. A circular of the State Council in 2016 suggests that in large and super cities, different *hukou* policies should be created for downtown areas, suburbs, and new districts according to occupation, residence, participation in social security, and years stayed, and that medium and large cities should not set barriers on *hukou* for house purchasing, investment, or tax payment. It also requires that cities with a downtown permanent population below 3 million should not implement the credit-based *hukou* system[1675].

It is still very difficult for rural migrant workers to get an urban *hukou* for the largest cities, where the public goal is to limit the population influx[1676]. Even if – except in particular for the largest cities - moving between rural areas and towns has become much easier over time, the *hukou* system nevertheless remains in place, resulting in putting large portions of the workforce in vulnerable situation and a position of disadvantage, as highlighted by the Covid pandemic[1677].

The disadvantages of not having a hukou for the place of residence

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1671 See Center for Strategic and International Studies ('*CSIS*'). *China's Hukou Reform in 2022*, available at: https://www.csis.org/blogs/new-perspectives-asia/chinas-hukou-reform-2022-do-they-mean-it-time-0 (accessed on 15 June 2023).

1672 *Ibid.*

1673 *Ibid.*

1674 OECD (2017). *OECD Economic Surveys: China 2017*, p. 117, available at: http://dx.doi.org/10.1787/eco_surveys-chn-2017-en (accessed on 15 June 2023).

1675 See *The General Office of the State Council issued and promoted 1 million non-registered people in cities*, available at: http://www.gov.cn/zhengce/content/2016-10/11/content_5117442.htm (accessed on 15 June 2023); See also State Council website, *China to resolve hukou issue for 100 million rural migrants*. http://english.gov.cn/policies/latest_releases/2016/10/11/content_281475463620362.htm (accessed on 15 June 2023).

1676 See Chan, K.W. (2021). *Internal Migration in China-Integrating Migration with Urbanization Policies and Hukou Reform*, available at: https://www.knomad.org/sites/default/files/2022-02/Policy%20Brief%2016_Internal%20Migration%20in%20China-Integrating%20Migration%20with%20Urbanization%20Policies%20and%20Hukou%20Reform-Nov_21.pdf (accessed on 19 June 2023).

1677 *Ibid.*

Even though there are no more formal restrictions on mobility *per se* and workers can relocate freely, migrant workers who do not possess a local *hukou* continue to have difficulties obtaining access to education for their children, health care, pension, welfare and affordable housing in their place of work[1678]. Those restrictions in practice are a factor discouraging or effectively hindering workers' mobility across China.

Rural migrant workers' income is still lagging behind the average urban income. According to the National Bureau of Statistics of China, the average monthly income of rural migrant workers in 2021 was RMB 4 432, an increase of RMB 360 or 8.8% over the previous year[1679] (for comparison it was RMB 3 072 in 2015[1680]). At the same time the average wage of persons employed in urban private units was around RMB 5 240 monthly[1681] and RMB 8 903 for urban non-private units[1682]. However, research by China Development Research Foundation pointed to a relatively small impact of the *hukou* status on this difference, attributing only 5% of the wage difference to *hukou* in 2010 (down from 11% in 2001)[1683]. The other factors responsible for wage differences include difference in education, skills and other work-related qualifications. According to the World Bank data from 2010, average wages of migrant and local workers appear to be converging, indicating that the labour market is slowly converging to a system based on demand and supply[1684].

According to MOHRSS, in 2011, rural migrant workers still accounted for 90% of the workforce in construction, cleaning, domestic services and services in restaurants in urban areas[1685]. By providing a massive supply of low-cost labour, rural migrant workers contributed significantly to China's extensive growth model[1686]. Though the current structure is changing and gradually converging with internationally recognised labour standards, it seems that at the moment the system is still partly impacted by the distortions of the past.

13.8. LAW ENFORCEMENT

1678 World Bank and the Development Research Center of the State Council, PRC (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, p. 331.

1679 See the National Bureau of Statistics 2021 report, available at: http://xjzd.stats.gov.cn/xwfb/xxfx/202205/t20220513_130349.html (accessed on 15 June 2023).

1680 See National Bureau of Statistics website (2016). *China's Economy Realized a Moderate but Stable and Sound Growth in 2015*, available at: http://www.stats.gov.cn/english/PressRelease/201601/t20160119_1306072.html (accessed on 15 June 2023).

1681 See National Bureau of Statistics of China. *The Average Annual Wage of Persons Employed in Urban Private Units In 2021*, available at: *http://www.stats.gov.cn/english/PressRelease/202205/t20220523_1857682.html* (accessed on 15 June 2023).

1682 *Ibid.*

1683 China Development Research Foundation (2013). *The Turning Period of China's Income Distribution: An Impact Assessment on Income Distribution-related Policies in China* (Executive Summary), p.5, available at: http://www.cn.undp.org/content/china/en/home/library/poverty/executive-summary--the-turning-period-of-china-s-income-distribu.html (accessed on 15 June 2023).

1684 World Bank and the Development Research Center of the State Council, PRC (2013). *China 2030: Building a Modern, Harmonious, and Creative Society.* Washington, DC: World Bank, p. 328.

1685 International Labour Organization, Promoting Decent Employment for Rural Migrant Workers, ILO, 2011.

1686 Das, M and N'Diaye, P. (2013). *Chronicle of a Decline Foretold: Has China Reached the Lewis Turning Point?* IMF Working Paper No. 13/26, Research Department and Asia and Pacific Department, page 3.

Chinese labour regulations are relatively strict. With regard to the 2007 Labour Contract Law[1687], using the Employment Protection Legislation ('*EPL*') strictness applied to OECD countries, China would rank third in EPL strictness among OECD countries if this law was fully implemented[1688].

However, it is necessary to look at the compliance rate to understand the practical implications of the written laws. The subjective assessments of workers and firm managers suggest that the compliance rate is high and that the government has made a serious effort to implement the new Law[1689]. It seems that the enactment of the Labour Contract Law indeed puts a stronger burden on employers, as according to some accounts, some labour-intensive manufacturers decided to relocate out of China after the law came into force. For example, numerous manufacturers in Guangdong moved their production to other countries such as Vietnam and Burma, where labour was cheaper and legally less protected, and Wal-Mart reportedly dismissed a number of white-collar employees in 2007 to minimize the impact of the new law [1690].

Since implementation of the Labour Contract Law in 2008, employers have tried to evade the legal requirements in several ways. It has been noted that there was a rise in labour subcontracting following implementation of the new law. Subcontracted workers, even though in possession of a formal contract, typically have lower wages, lower social insurance and less security[1691]. Another practice was to disregard the provisions of the contract, for example with respect to the number of working hours and wages. In August 2021, the Supreme Court and Ministry of Human Resources issued guidance that imposed limitations and the legal workweek is supposed to be 40 hours a week and eight hours a day, with a cap of 44 hours in a week[1692]. However, according to Chinese labour laws, employers may extend employees' work hours by an hour per day, if agreed upon by the applicable trade union, yet the maximum number of extra hours cannot exceed three hours per day or 36 hours in a month and employees must be given at least one rest day for every week of work. Due to the lack of statistical evidence, there is no data to clearly establish whether the changes to the law are upheld and enforced or such practices still are relatively common.

The labour dispute resolution system, introduced in the 1994 Labour Law, provides for a three-step system beginning with voluntary mediation, followed by compulsory arbitration and finally ending with possible appeals of the arbitration decision in civil courts[1693]. Between 1995

1687 See Labor Contract Law of the PRC, available at: https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3NGQ3MTA2YjM (accessed on 15 June 2023).

1688 Gallagher, M., Giles, J., Park, A. and Wang, M. (2014). *China's 2008 Labor Contract Law: Implementation and implications for China's workers*. Human Relations, 68(2), pp.197-235, p. 199.

1689 *Ibid.*, p. 201-206.

1690 Wang, H., Appelbaum, R.P., Degiuli, F. and Lichtenstein, N. (2009). *China's New Labour Contract Law: is China moving towards increased power for workers?* Third World Quarterly, 30:3, 485-501, p. 488.

1691 Gallagher, M., Giles, J., Park, A. and Wang, M. (2014). *China's 2008 Labor Contract Law: Implementation and implications for China's workers*. Human Relations, 68(2), pp.197-235, p. 211.

1692 *China labor laws: An overview for global employers*. (11 January 2022), available at: https://www.safeguardglobal.com/resources/blog/china-labor-laws (accessed on 15 June 2023).

1693 Labour Law, Article 79: "*After a labour dispute occurs, the parties concerned may apply to the Employers' labour dispute mediation committee for mediation; where no agreement is reached through mediation and*

and 2007, labour disputes increased on average by about 25% annually, and in 2008 arbitrated labour disputes almost doubled nationally[1694]. Since the implementation of the Labour Contract Law in 2008, the number of labour disputes, has grown further and remains high. According to the National Bureau of Statistics of China, there were 894 thousand of national labour dispute cases in 2018 and more than 1 million in 2019 and in 2020[1695].

A practical problem of labour law enforcement is the lack of resources for dispute resolution. According to official sources, in 2010 there were 600 000 arbitrated disputes and only 946 arbitration centres throughout the country. The number of labour disputes has continued to increase in recent years, e.g., Chinese mediation and arbitration authorities handled some 1 771 000 disputes in 2016[1696], and 1 834 000 disputes in the first three quarters of 2021[1697]. Though the Labour Disputes Mediation and Arbitration Law provides that an arbitral award shall be made within 60 days of the acceptance of the arbitration application, it was observed that in practice a resolution can take one to two years[1698]. China Urban Labor Survey using a sample of 75 disputes between 1997 and 2010 showed that the dispute initiation rate of local residents and migrant workers was very similar (less than 1% of workers in each group initiated a dispute, mostly about wages). Whereas the local residents were dissatisfied with the results of the dispute resolution, most migrants expressed their satisfaction, perhaps because their expectations entering into the process were lower[1699].

13.9. FORCED LABOUR

ILO definition and indicators of forced labour

In the ILO Forced Labour Convention, 1930 (No. 29) forced labour is defined as "*all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself/herself voluntarily*"[1700]. Forced labour constitutes a serious violation of human dignity and fundamental human rights[1701]. The ILO has declared the elimination of all forms of forced or compulsory labour as a principle concerning fundamental

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a party requests arbitration, it may apply to the labour dispute arbitration committee for arbitration. Either party may also directly apply to the dispute arbitration committee for arbitration. Where a party is dissatisfied with the arbitration award, it may file a lawsuit to a people's court."

1694 Gallagher, M., Giles, J., Park, A. and Wang, M. (2014). *China's 2008 Labor Contract Law: Implementation and implications for China's workers*. Human Relations, 68(2), pp.197-235, p. 215.

1695 894,053 in 2018, 1,069,638 in 2019 and 1,094,788 in 2020; see Liu, Z., Shen, J., Sun, L., and Cui, Y. (AnJie Broad Law Firm) (2022). *The Labour and Employment Disputes Review: China*., available at: https://www.vow.be/sites/vow.be/files/Disputes%20Review%202021%20-%20Belgium.pdf (accessed on 15 June 2023).

1696 See MOHRSS website, available at: http://www.MOHRSS.gov.cn/tjzcgls/TJZCgongzuodongtai/201704/t20170401_268936.html (accessed on 15 June 2023).

1697 See at: http://www.MOHRSS.gov.cn/xxgk2020/fdzdgknr/ldgx_4234/ldrsdjzc/202111/t20211102_426617.html (accessed on 19 June 2023).

1698 Gallagher, M., Giles, J., Park, A. and Wang, M. (2014). *China's 2008 Labor Contract Law: Implementation and implications for China's workers*. Human Relations, 68(2), pp.197-235, p. 217.

1699 *Ibid.*

1700 See at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C029 (accessed on 15 June 2023).

1701 As recognised in the Preamble to the 2014 Protocol to ILO Convention No. 29.

rights. According to ILO research, in 2014 the annual profit from using forced labour in the Asia-Pacific region accounted for around USD 5 000 annually per forced labour victim[1702].

The ILO has developed a set of eleven indicators pointing to the possible existence of forced labour: abuse of vulnerability, deception, restriction of movement, isolation, physical and sexual violence, intimidation and threats, retention of identity documents, withholding of wages, debt bondage, abusive working and living conditions, and excessive overtime[1703].

The ILO has published guidelines for the measurement of forced labour[1704]. The ILO has also encouraged its members to collect data on forced labour in their respective countries (including by means of standard questionnaires, manuals and sampling tools for statistical surveys) and provided recommendations for the collection and analysis of forced labour statistics, in order to facilitate their international comparability. The ILO's Forced Labour Observatory[1705] provides comprehensive global and country information on forced labour related to international and national legal and institutional frameworks, enforcement, prevention, including fair recruitment and due diligence, protection, access to justice, remedies, and cooperation. The Observatory aims to provide an overview of the situation of forced labour in the world, with country profiles available for all 187 ILO member states.

The 2022 report on Global Estimates of Modern Slavery[1706] elaborated by the ILO, Walk Free Foundation, and International Organisation for Migration ('*IOM*'), estimates the global number of people in forced labour at 27.6 million in 2021 (which represents an increase of 2.7 million since 2016)[1707], and Asia and the Pacific alone account for more than half of the global total (15.1 million). According to this report, five economic sectors alone account for 87% of all forced labour: services (including trade, transport, hospitality, but not including domestic work), manufacturing, construction, agriculture (not including fishing), and domestic work.

As mentioned in Section 13.3, in 2022, China ratified the ILO Forced Labour Convention, 1930 (No. 29), as well as the Abolition of Forced Labour Convention, 1957 (No. 105) – both are in force since August 2023. As highlighted by the ILO[1708], the latter requires ratifying member states "*to suppress and not to make use of any form of forced or compulsory labour: (a) as a means of political coercion or education or as a punishment for holding or expressing political*

1702 See ILO, *Profits and Poverty: The Economics of Forced Labour*, page 14, published in 2014, available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_243391.pdf (accessed on 15 June 2023).

1703 ILO Indicators of Forced Labour, ILO, Geneva, 2012; available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_203832.pdf (accessed on 15 June 2023).

1704 ILO Guidelines concerning the measurement of forced labour. International Labour Office (ICLS/20/2018/Guidelines).

1705 See at: https://www.ilo.org/flodashboard/ (accessed on 15 June 2023).

1706 https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---ipec/documents/publication/wcms_854733.pdf *Global Estimates of Modern Slavery: Forced Labour and Forced Marriage.* ILO, Walk Free, and IOM, Geneva, 2022; available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---ipec/documents/publication/wcms_854733.pdf (accessed on 15 June 2023).

1707 Forced marriage and early marriage are included in the definition of modern slavery but they are not considered forced labour.

1708 ILO (2022), Global Estimates of Modern Slavery, Forced Labour and Forced Marriage, see at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---ipec/documents/publication/wcms_854733.pdf (accessed on 15 June 2023).

views or views ideologically opposed to the established political, social or economic system; (b) as a method of mobilising and using labour for purposes of economic development; (c) as a means of labour discipline; (d) as a punishment for having participated in strikes; or, (e) as a means of racial, social, national or religious discrimination" [1709].

Concerns about state-imposed forced labour presence in China

During its review of China's periodic report in August 2018, the UN Committee on the Elimination of Racial Discrimination ('*CERD*') expressed alarm over numerous reports of the detention of large numbers of ethnic Uyghurs and other Muslim minorities, under the pretext of countering religious extremism in the Xinjiang Uygur Autonomous Region ('*XUAR*')[1710]. The Chinese Government stated that "*vocational training centres exist for people who had committed minor offences*"[1711]. In subsequent policy papers, the Government has presented such centres as part of its strategies to counter terrorism and to prevent or counter "*extremism*" in XUAR, while at the same time contributing to development, job creation and poverty alleviation in the region[1712].

China has put in place a number of legislative instruments to pursue these strategies in XUAR. The most important include:

- The 2010 Notice on improving the Autonomous Region the transfer and training of surplus rural labour force[1713], setting out the principle '*one household, one person*' as a quantitative objective, which means that in the four poor southern XUAR areas, each household must transfer one person for training and employment purposes.
- The 2014 Xinjiang Notice on Combatting Religious Extremism[1714] setting out that "*for religious reasons, refuse to receive governmental management, governmental allowance or support*" amounts to religious extremism which shall be combatted.
- The 2016 Notice of the Autonomous Region Party Committee on effectively implementing the CCP and State Council decision on poverty eradication[1715] setting out quantitative objectives according to which by 2020 "*2.61 million rural poor population shall be lifted out of poverty, 3029 poor villages shall be completely lifted out of poverty, 35 districts shall be completely* 'reformed'[1716] *so as to solve the overall poverty problem in the four South Xinjiang areas*".

1709 ILO (12 August 2022), China ratifies the two ILO Fundamental Conventions on forced labour, ILO Press release.

1710 *Concluding Observations on the combined fourteenth to seventeenth periodic reports of China* (Including Hong Kong, China and Macao, China), CERD/C/CHN/CO/14-17, para, 40(a), 19 September 2018.

1711 *Ibid.*

1712 The State Council (2019), *White Paper on Vocational Education and Training in Xinjiang.*

1713 Available at: https://rst.xinjiang.gov.cn/rst/c100465/201005/31f0ccd8dce341c18c4e1f752dc98c31.shtml (accessed on 24 May 2023); see Section II.

1714 Available at http://news.sina.com.cn/c/2014-12-24/093231321497.shtml (accessed on 19 June 2023); see point 16.

1715 Decision of the CPC Central Committee and the State Council on Winning the Battle against Poverty. Section II-2, available at: http://www.china.com.cn/lianghui/fangtan/2016-02/18/content_37818171.htm (accessed on 15 June 2023).

1716 Here, the Chinese term translated as 'reformed' is an expression widely used during the Cultural Revolution to mention someone who was on the 'rightist' side and was reformed to have the 'correct' political opinions.

- The 2019 State Council White Paper on Xinjiang counterterrorism, de-radicalisation and human right protection[1717] which mentions the transfer of labour force as major means to fight against terrorism.

In March 2021, the UN human rights experts[1718] raised "*serious concerns about the alleged detention and forced labour of Muslim Uyghurs in China, calling for unhindered access to the country to conduct fact-finding missions and urging global and domestic companies to closely scrutinize their supply chains*"[1719].

The ILO Committee of Experts on the Application of Conventions and Recommendations noted that "*training facilities that house the Uyghur population and other Turkic and Muslim minorities separate them from the mainstream educational and vocational training, vocational guidance and placement services available to all other groups in the region throughout the country at large. Such separation may lead to active labour market policies in China being designed and implemented in a manner that generates coercion in the choice of employment and has a discriminatory effect on ethnic and religious minorities*"[1720]. In its follow-up observation, the Committee reiterates "*its deep concern in respect of the serious allegations of discrimination against ethnic and religious minorities in Xinjiang, which appears to be based on policy directions expressed in numerous national and regional policy and regulatory documents*".[1721]

According to the International Trade Union Confederation ('*ITUC*'), some 13 million members of the ethnic and religious minorities in XUAR "*are targeted on the basis of their ethnicity and religion with a goal of social control and assimilation of their culture and identity.*" In its observations of 2020 and 2021, the ITUC alleged that "*the Government of China has been engaging in a widespread and systematic program involving the extensive use of forced labour of the Uyghur and other Turkic and/or Muslim minorities for agriculture and industrial activities throughout* [...] *Xinjiang* [...]*, in violation of the right to freely chosen employment set out in Article 1(2) of [Employment Policy] Convention No 122*"[1722]. The ITUC also alleged

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1717 See *Xinjiang's fight against terrorism and extremism and human rights protection*, See Section 5 *Put Counter-terrorism first*, available at: http://www.gov.cn/zhengce/2019-03/18/content_5374643.htm (accessed on 15 June 2023).

1718 The experts are the UN Working Group on human rights and transnational corporations and other business enterprises (the Working Group on Business and Human Rights), Special Rapporteur on Torture and other Cruel, Inhuman or Degrading Treatment or Punishment, Special Rapporteur on freedom of religion or belief, Special Rapporteur on contemporary forms of slavery, including its causes and consequences, Working Group on Arbitrary Detention, Special Rapporteur on trafficking in persons, especially women and children, Special Rapporteur on minority issues, Special Rapporteur in the field of cultural rights.

1719 OHCHR *China: UN experts deeply concerned by alleged detention, forced labour of Uyghurs,* published on 29 March 2021, available at: https://www.ohchr.org/en/press-releases/2021/03/china-un-experts-deeply-concerned-alleged-detention-forced-labour-uyghurs (accessed on 15 June 2023).

1720 Application of International Labour Standards 2022 Report III (Part A) Report of the Committee of Experts on the Application of Conventions and Recommendations, International Labour Conference 110th Session, 2022, p.687, available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_836653.pdf (accessed on 15 June 2023).

1721 Observation (CEACR) - adopted 2022, published 111st ILC session (2023), available at: https://www.ilo.org/dyn/normlex/en/f?p=1000:13100:0::NO:13100:P13100_COMMENT_ID,P13100_COUNTRY_ID:4323397,103404:NO (accessed on 1 March 2024).

1722 *Ibid.*, p.515 and p.683-684.

prison labour, mainly in cotton harvesting and the manufacture of textiles, apparel and footwear[1723]. According to the ITUC's allegations, "*the Government offers incentives and tax exemptions to enterprises that train and employ detainees; subsidies are granted to encourage Chinese-owned companies to invest in and build factories near or within the internment camps; and compensation is provided to companies that facilitate the transfer and employment of Uyghur workers outside the Uyghur Region*"[1724]. The ITUC also added that "*where wages are paid, they are often subject to deductions that reduce the salary to almost nothing*" [1725].

In August 2022, the Office of the United Nations High Commissioner for Human Rights ('*OHCHR*') in its Assessment of human rights concerns in the Xinjiang Uyghur Region, People`s Republic of China stated that "*serious human rights violations have been committed in XUAR in the context of the Government's application of counter-terrorism and counter-'extremism' strategies. The implementation of these strategies, and associated policies in XUAR has led to interlocking patterns of severe and undue restrictions on a wide range of human rights. These patterns of restrictions are characterized by a discriminatory component, as the underlying acts often directly or indirectly affect Uyghur and other predominantly Muslim communities*"[1726].

In November 2022, CERD called upon China "*to immediately investigate all allegations of human rights violations in the XUAR, including those of torture, ill-treatment, sexual violence, forced labour, enforced disappearances and deaths in custody*"[1727]. Acting under its Early Warning and Urgent Action Procedure, CERD, concerned by the reports of serious human rights violations committed in the XUAR and the discriminatory character of severe and undue restrictions on a wide range of human rights, targeting predominantly Uyghur and other ethnic Muslim communities in the XUAR, called "*to immediately release all individuals arbitrarily deprived of their liberty in the XUAR*" and recommended to "*undertake a full review of* [China's] *legal framework governing national security, counter terrorism and minority rights in the XUAR to ensure their full compliance with the State party's obligations under the International Convention on the Elimination of All Forms of Racial Discrimination*", as well as urged "*to immediately cease all intimidation and reprisals against Uyghur and other ethnic Muslim communities, the diaspora and those who speak out in their defence, both domestically and abroad*" and "*to ensure that victims of human rights violations, including Uyghurs and other ethnic Muslim communities, are provided with adequate and effective remedies and reparation*". It also urged "*to effectively implement the Concluding Observations of the Committee on the Elimination of Racial Discrimination, the Committee against Torture, as well*

1723 *Ibid.*, p.515.

1724 *Ibid.*, p.516 and p.684.

1725 *Ibid.*, p. 516 and p.684.

1726 HCHR Assessment of human rights concerns in the Xinjiang Uyghur Autonomous Region, PRC, available at: https://www.ohchr.org/sites/default/files/documents/countries/2022-08-31/22-08-31-final-assesment.pdf (accessed on 15 June 2023).

1727 UN press release, 24 November 2022, *China: UN Committee on the Elimination of Racial Discrimination calls for probe into Xinjiang right violations*, available at: https://www.ohchr.org/en/press-releases/2022/11/china-un-committee-elimination-racial-discrimination-calls-probe-xinjiang (accessed on 16 June 2023).

as the recommendations included in the OHCHR Assessment of human rights concerns in the Xinjiang Uyghur Autonomous Region, People's Republic of China [...] "[1728].

13.10. CHAPTER SUMMARY

According to China's Trade Union Law, Chinese workers have no possibility to freely choose or establish a trade union in which they want to organise themselves, because there is only one legally recognized trade union, the ACFTU. Furthermore, although collective bargaining of wages exists, it is not well developed.

Among the eleven instruments (10 conventions and one protocol) that the International Labour Association itself classifies as fundamental, China has not yet ratified the following four instruments: Convention No. 87 (Freedom of Association and Protection of the Right to Organise Convention), Convention No 98 (Right to Organise and Collective Bargaining Convention), Convention No. 187 (Promotional Framework for Occupational Safety and Health Convention), and Protocol No. 29 (to the Forced Labour Convention). The two instruments on freedom of association (C87) and collective bargaining (C98) are of critical importance for the structure of the labour market in that they attribute rights to workers and employers and promote market-based wages (see Section 13.3).

The ACFTU has around 300 million members and is present in 6.5 million enterprises. However, the ACFTU is not independent, but rather is closely intertwined with the Party and the State. There is evidence that senior positions in ACFTU are occupied by senior party figures in SOEs or by managers in non-state enterprises. In other words, the union leaders appear to also be high level managers. This hampers their ability to represent workers' interests in full independence. All this can lead to situations where the management or, in the case of SOEs, the government negotiates with itself.

There is no official national level right to strike. In fact, this right was removed from the Constitution in 1982. In practice, strikes do happen in China and some local laws recognize some form of right to strike, but there are also a number of reports of labour activists being arrested, detained, imprisoned or made forcible disappeared (see Section 13.6).

Collective bargaining exists and ACFTU engages therein. In the past, the results have often been considered as insufficient by workers, but more recently some improvement has been reported. There are now a number of written rules and policy documents (at the provincial level and below) promoting collective bargaining, and ACFTU is also stepping up its efforts. However, the relatively vague and underdeveloped legal and procedural framework as well as the absence of a clearly recognized right to strike still constitute considerable hurdles to effective bargaining.

Furthermore, the Chinese workforce is impacted by the *hukou* household registration system (see Section 13.7). Only *hukou* holders have access to the full range of social protection and

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[1728] Decision 1 (108) of the Committee on the Elimination of Racial Discrimination of 23 November 2022 "Prevention of Racial Discrimination, including Early Warning and Urgent Action Procedure", available at: https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=INT%2FCERD%2FEWU%2FCHN%2F9624&Lang=en (accessed on 15 June2023).

public welfare benefits. Originally, this system restricted migration between rural and urban areas, though this restriction has been considerably relaxed. In 2014, a single national resident registration system was introduced, but there are different rules for obtaining a *hukou*, depending on the size and the area of a city, with the largest cities having more restrictive rules. It seems to be virtually impossible for workers with the lowest qualifications (the least paid workforce) to obtain a residence permit in large cities. Migrant workers who do not possess a local *hukou* find themselves in a vulnerable employment position in their place of residence and receive lower income than the *hukou* holders, though this may be a reflection of lower skills. The considerable number of migrant workers without labour contracts also means that the actual labour force employed by Chinese companies can be difficult to reliably determine, with the ensuing uncertainty about the labour cost.

Last but not least, the issue of state-imposed forced labour has come to the fore in the last few years - notably with respect to XUAR - impacting or likely impacting labour as factor of production in various sectors (see Section 13.9).

PART III

DISTORTIONS IN SELECTED SECTORS

14. STEEL SECTOR

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14.1. REGULATORY FRAMEWORK

The various policy documents described in this Section detail the extent of intervention and control exerted by the Government in the steel sector[1729]. They include:

- the 14th FYP,
- the 14th Raw Materials FYP (or also the '*Plan*' in this Chapter),
- the Guiding Opinion on Promoting High-Quality Development of the Iron and Steel Industry ('*Steel Industry Development GO*'),
- various implementing and guiding documents related to steel, in particular the 2023 Work Plan on the Stable Growth of the Steel Industry, the Plan for Adjusting and Upgrading the Steel Industry, as well as previous measures guiding the development of the steel industry and those addressing overcapacity problems.

[1729] This Section focuses on those plans, directives and any type of policy issued since the early 2000s, as it was the period where the Chinese steel sector started growing significantly, becoming the largest steel producer in the world.

The 14th Raw Materials FYP and the Steel Industry Development GO give top-level guidance for the development of the steel sector for the period 2021-25.

Breaking with past practice, MIIT did not publish a central-level FYP focusing solely on the steel industry for the 14th planning cycle. Instead, the development goals for the steel industry were incorporated into the 14th Raw Materials FYP, making it the most comprehensive central-level plan for steel for 2021-25.

14.1.1. 14th FYP

The 14th FYP is examined in detail in Section 4.2.5. Therefore, only the relevant provisions concerning the steel sector are presented in this Chapter.

The 14th FYP sets out some general objectives regarding the steel industry, with emphasis on the development of high-end new materials and the greening of the steel sector. Among other priorities, the plan aims at accelerating the development of the industrial system and consolidating the foundation of the real economy. This includes optimization and structural adjustments of the steel industry, as well as promoting breakthroughs in advanced metals, including high-quality special steels[1730].

Compared to previous FYPs, environmental concerns and greening the steel sector feature more prominently in the 14th planning cycle. The 14th FYP thus envisages promoting a green transformation of steel as part of the green transformation of the Chinese economy. This includes curbing carbon emissions in the steel industry, aiming to complete ultra-low emission transformation for 530 million tons of steel production capacity[1731]. General objectives on greening the steel industry are also found in a number of other central-level plans, such as the 14th FYP on Circular Economy[1732], the 14th FYP on Promoting Clean Production[1733], the 14th FYP on Supporting Industrial Transformation and Upgrading of Traditional Industrial Cities and Resource-Based City Demo Zones[1734] or the 14th FYP on the Green Development of Industry[1735].

14.1.2. 14th Raw Materials FYP

As mentioned above, the MIIT did not publish a separate central-level FYP focusing solely on the steel industry for the 14th planning cycle. Instead, the development goals for the steel industry have been incorporated into the 14th Raw Materials FYP, which covers several sectors. Emphasising from the outset that the raw material industry is the bedrock of the real economy, the Plan states that it was "*formulated in order to implement the* [14th FYP] *and improve the*

1730 14th FYP, Section VIII-4.

1731 14th FYP, Section XXXIX-4.

1732 Available at: https://www.ndrc.gov.cn/xwdt/tzgg/202107/t20210707_1285530.html?code=&state=123 (accessed on 28 September 2023).

1733 Available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202111/t20211109_1303467.html?code=&state=123 (accessed on 28 September 2023).

1734 Available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202111/t20211130_1306223.html?code=&state=123 (accessed on 28 September 2023).

1735 Available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2021/art_4ac49eddca6f43d68ed17465109b6001.html (accessed on 28 September 2023).

development quality and profitability of the raw materials industry". Complementing the Plan, MIIT, together with NDRC and MEE, issued, in January 2022, the Steel Industry Development GO[1736] which set additional quantitative targets. Since the stated purpose of the Steel Industry Development GO is to implement the 14th FYP and the 14th Raw Materials FYP[1737], it is appropriate to examine the Plan and the Steel Industry Development GO together, as they give top-level guidance for the development of the steel sector from multiple angles.

General development objectives

Some of the basic principles for the development of the steel industry outlined in the various planning documents are formulated in rather contradictory terms. The Plan mentions among the basic principles the objective to "*give full play to the decisive role of the market in resources allocation and boost the dominant role played by enterprises in investment decision making*". At the same time and under the same basic principle, the Plan calls to "*better leverage the role of the government, lay greater emphasis on the guiding role of strategic plans and the formulation of standards, law and regulations, maintain the market order* [...]". The Steel Industry Development GO elaborates further the Chinese authorities' vision of the development of the steel industry:

> [We shall] *strengthen the regulation and management of steel enterprises' production and operations, strengthen requirements as to quality, equipment, environmental protection, energy consumption, safety, and other factors.* [We shall] *strengthen the establishment of a system based on enterprises' honesty, create a fair and honest market environment, punish in accordance with laws and regulations any unauthorised increase of production capacity, counterfeiting, or illicit pollutant emission, and integrate them into a joint sanction mechanism.* [We shall] *give full play to the role of industry organizations, enhance the enterprises' social responsibility awareness and the industry sector's self-discipline, avoid disorderly and vicious competition and maintain the industry's smooth operating.*

The Plan envisages a further decline in the production capacity of crude steel and calls for continuing industrial concentration to optimize production capacities. Quantitative targets in that regard include cultivating *"five to ten pioneering enterprises with ecological leadership and core competitiveness in the industry chain*" as well as developing "*at least five world-class advanced manufacturing clusters in the field of raw materials"*[1738]. In October 2022, the Chinese Iron and Steel Association ('*CISA*') announced that it would accelerate efforts to promote M&As to increase the industry concentration and profits amid challenges such as an increasingly complex international landscape, domestic COVID-19 resurgences and soaring

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1736 Available at: https://www.gov.cn/zhengce/zhengceku/2022-02/08/content_5672513.htm (accessed on 28 September 2023).

1737 Steel Industry Development GO, Preface.

1738 The Plan, Section II (III).

raw material prices[1739]. China's policy is to create large, globally competitive steel companies, in part through mergers that are not reviewed by competition authorities in other jurisdictions.

Finally, in pursuit of green development, the Plan projects delivery of "*phased outcomes in controlling the total energy consumption and total carbon emissions of key sectors including steel*", while "*comprehensive energy consumption per ton of steel in the steel sector will drop by 2 percent*"[1740]. On top of that, the Steel Industry Development GO sets an ambitious goal of promoting the transformation of over 80% of steel enterprises to achieve ultra-low emissions[1741].

Striving for the High-end Industry Supply

The Plan sets an important role for the authorities when it comes to promoting innovation in the industry. Local governments are encouraged to adopt a mix of measures to build national key platforms for the pilot scale tests of new materials. In addition, the Plan envisages that a national public platform for scientific research facilities of new materials will be built.

In market economies, these tasks related to research and development activities would be performed by private actors and not by the public authorities, the role of which is to only promote them. The Chinese authorities further intervene in the area of strengthening of international exchanges and cooperation, insofar as they support key international enterprises and research institutes to make investments, set up plants and develop R&D centres in China[1742].

The Plan also sets out a number of objectives for breakthroughs in key technologies and key materials, as well as establishing new standards to improve product quality. In the steel sector, emphasis is to be put on the following aspects of technological innovations:

- developing key generic technology for efficient, low-cost and clean steel melting;
- setting up an integrated application system for the manufacturing technology of general-purpose and special-purpose equipment, parts and components (advanced electric arc furnace technology and its manufacturing process, near net shape manufacturing, special-purpose smelting, and high-end detection);
- pushing for the industrial application of such technologies as filling mining, low-grade refractory ores, sintering flue gas recycling, mechanized raw materials yards, the fine desulfurization of blast furnace gas, efficient desulfurization and denitrification, residual heat recovery, the utilization of medium- and low-temperature residual heat, and the high added-value resource utilization of steel slags[1743].

In the area of key materials, the Plan identifies the need "*to lay equal emphasis on advance in materials and on the leading role of demand*". At the same time there should be a "*focus on the*

1739 See at: https://www.chinaisa.org.cn/gxportal/xfgl/portal/content.html?articleId=29d6106bb6c72b1f9b7cbecbd29209c32fa7416c73bd22aab0a6e25471096907&columnId=58af05dfb6b4300151760176d2aad0a04c275aaadbb1315039263f021f920dcd (accessed on 28 September 2023).

1740 The Plan, Section II (III).

1741 Steel Industry Development GO, Section I (III).

1742 The Plan, Section III (I).

1743 The Plan, Section III (II), Feature 1.

key needs related to the building of the national defence". Another example is that the Plan mentions "*the need to lay emphasis on the leading role of demand*" and at the same time indicates that a "*catalogue of key building materials and products*" will be drawn up. Thus, it appears to leave little space for the market forces to drive the development of key materials.

The Plan also enumerates the "*application fields*" considered as key: "*giant aircraft, aero-engines, integrated circuits, information communication, biological industries and energy industries*" and foresees that "*a range of key materials*" will be developed for these fields, listing high-performance special-purpose steel as one of the key New Materials for application in these key fields[1744]. The Steel Industry Development GO further specifies that when it comes to enhancement of supply of advanced steel products "*breakthroughs will be made in about five critical steel materials every year*"[1745]. This evidence points to the substantial role played by the State for the development of the sector.

Moreover, the Plan envisages the establishment of quality assessment and certification systems. To that end, the steel sector will be enticed to launch tiered quality assessment to achieve effective alignment among product standards, measurement and detection technology. The Plan specifies that this will include setting up a new material certification system as well as supporting professional third-party market players to establish high-end quality certification agencies[1746].

Industrial structure and overcapacity

SOEs are the most important players in the Chinese steel market and a considerable part of the steel industrial structure, often receiving important preferential treatment from the State (see Chapter 5). According to an OECD study[1747], a considerable amount of financial support to Chinese SOEs is provided via instruments deemed to be potentially amongst the most market distortive (for example cash grants).

Since decades, the Chinese steel sector has been characterised by massive overcapacity, a fact acknowledged in various official planning documents. The Chinese authorities have unsuccessfully tried to solve this problem. An essential factor which makes resolving the overcapacity issue difficult is the misalignment of local and national goals. Local governments want to maximize employment and tax revenue and avoid the massive hit to employment that would come from closing down steel mills. Because some steel producers were owned by local and provincial governments, it has been complicated for the Government to compel reductions. The failure to solve the overcapacity is also due to the authorities pursuing additional objectives, such as to create national champions able to compete internationally. As the mergers, reorganizations and the industrial concentration are rather source of upgrade of the industry and

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1744 The Plan, Section III (III), Feature 2.

1745 Steel Industry Development GO, Section I (III).

1746 The Plan, Section III (IV).

1747 OECD (2022). *State-owned enterprises and subsidisation in the steel sector: evidence from China*.

capacity increase[1748], the contradiction with the proclaimed goal of capacity reduction remains unresolved.

The thrust of the transformation of the Chinese steel industry as set out in the policy documents is in fact a straightforward one, characterized by the objectives to optimize the industrial structure, as well as to concentrate and upgrade the steel industry. This can be seen from the following excerpts of the Steel Industry Development GO[1749]:

> *Optimize production capacity control policies, deepen the reform of factor allocation, strictly implement capacity replacement and prohibit any new increase of steel production capacity. Support the best ones and eliminate the weak ones, encourage cross-regional and cross-ownership mergers and reorganizations and increase industry concentration.*
>
> [...] *Punish any unauthorised new increase of production capacity* [...]
>
> *Strictly implement laws and regulations on environmental protection, energy consumption,* [...] *so as to eliminate outdated production capacity and strictly prevent the resurgence of substandard steel and overcapacity.*

In this respect, the Plan lists measures to make leading enterprises "*bigger and stronger*", while the Steel Industry Development GO expressly seeks "[t]*o promote corporate mergers and reorganization,* [...] *encourage leading enterprises to implement mergers and reorganization and build a number of world-class super-large iron and steel groups*". In the same vein, the 2023 Work Plan on the Stable Growth of the Steel Industry aims at "*encourag*[ing] *industry-leading enterprises to implement mergers and acquisitions, build*[ing] *world-class super-large iron and steel enterprise groups, and foster*[ing] *the optimal layout of national iron and steel production capacity. Support*[ing] *specialized enterprises with leading power in particular steel market segments to further integrate resources and create a steel industry ecosystem".* To reach the goal the authorities are intent on removing obstacles to trans-regional mergers and reorganisation and encouraging financial institutions to provide comprehensive financial services for enterprises that have implemented mergers and reorganisation, as well as transformation and upgrading. In other words, it can be observed from the relevant planning and policy document that the objective of the Chinese authorities is to create more concentrated and stronger steel industry with leading enterprises even better able to compete internationally.

The objectives spelled out in the Plan and the Steel Industry Development GO are indeed implemented in practice, as the following example shows. On 22 September 2022, strategic cooperation agreements were signed between the Shanghai Government and China Baowu Iron and Steel Group Co., Ltd. The objective of these agreements is to optimize policy supply, create a first-class business environment, help China Baowu become better and stronger in Shanghai,

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1748 According to the World Steel Association (worldsteel), China Baowu Group was the world's largest producer of crude steel in 2020. Since China Baowu Group was established in 2016, the company has merged and acquired a series of Chinese steelmakers, increasing its steel production by 80.67% in merely three years from 63.81 million metric tonnes in 2017 to 115.29 million in 2020 (worldsteel, 2021[33]). See: Steel Market Developments 4/2021 (oecd.org).

1749 Steel Industry Development GO, Section I.(II).

and become a global industry leader[1750]. Similarly, in his speech given at the occasion of the signature of a strategic cooperation framework agreement between Jiangxi Provincial Government and Baowu in November 2022, the Baowu's Secretary of Party Committee and Chairman pointed out that Baowu was vigorously promoting the construction of a world-class great enterprise in accordance with the spirit of the 20th CCP Congress (see Section 2.2.4) and the spirit of President Xi's important instructions[1751]. To be noted in this connection that the report of the 20th CCP Congress emphasized the focus of the economic development as one which should be placed on the real economy, speeding up the construction of a strong manufacturing country, promoting state-owned capital and state-owned enterprises to become stronger, better and bigger, and enhance the core competitiveness of enterprises[1752].

At the same time, the Government projects a harsh stance against overcapacity, with the Plan spelling out that "*efforts to investigate and punish illegal acts of production capacity increase*" will be intensified, while *"strict crackdown campaigns"* will be maintained. To that end, intense surveillance methods are to be deployed, such as satellite monitoring, big data and other technology[1753]. However, when read in parallel with the Global Forum on Steel Excess Capacity ('*GFSEC*') figures for Chinese capacity increase in 2019, 2020 and 2021 and given that the Plan does not contain any prohibition of capacity increase, nor a binding objective for capacity reduction, these efforts are rather illusory.

Access to resources

To improve the comprehensive utilization of resources, well-placed regions will be encouraged to establish industrial parks for the coupling of the raw materials industry, so as to realize the cascading use of energy and resources. Notably, the Plan maintains that "*the mechanism for determining resource prices will also be improved*"[1754], clearly indicating that such price formation is not to be completely market based.

The Plan also prepares for expanding resource supply channels by tapping into "urban wastes" and supporting dominant enterprises to establish recycling bases and industrial agglomeration areas for large steel scraps[1755]. Furthermore, the Plan proclaims that the domestic self-sufficiency rate of ferrous metals will be greatly increased by 2025, with the ratio of steel scraps among them set to exceed 30%[1756]. These elements are important as they show that the Government intends to build out the entire steel ecosystem.

Implementation of the Plan

The Plan stipulates that "[a]*ll localities need to strengthen compliance with this Plan and ensure the main contents and major projects of the Plan are included in their key local tasks*", while "*steel and other key sectors shall formulate specific implementation opinions based on the*

1750 See at: http://sh.people.com.cn/n2/2022/0922/c134768-40135680.html (accessed on 3 October 2023).

1751 See Article from Mysteel website, November 2022, available at: https://m.mysteel.com/22/1114/07/101575DDBBAFACF4_abc.html (accessed 26 May 2023).

1752 See at: https://english.www.gov.cn/news/topnews/202210/25/content_WS6357df20c6d0a757729e1bfc.html; p. 23 (accessed on 3 October 2023).

1753 *Ibid.*

1754 The Plan, Section V (III).

1755 *Ibid.*, Section VII (I).

1756 *Ibid.*, Section VII.(I), Feature 5.

objectives and tasks of this Plan." The relevant departments of the State "*shall ensure the implementation of relevant initiatives, according to the division of duties and responsibilities*", while measures will be taken to establish general monitoring mechanisms as well as *"mid-term assessment mechanisms to follow through the implementation of the Plan*"[1757]. Sectoral organizations are '*bridge*' (see also Section 2.3.3) between enterprises and the government through providing feedback on problems and suggestions on the implementation of the Plan.

When it comes to the funding necessary for its implementation, the Plan calls on the government to "[f]*ully use existing funding channels to support major projects related to the Plan*", adding that "[t]*he industry –finance cooperation shall be deepened, and the national industry-finance cooperation platform shall be involved so as to provide financial services and equity investment in order to actively support for projects complying with the Plan.*"

While the Plan does not repeat the explicit language contained in previous FYPs concerning its binding character, the above text indicates that its binding nature remains unchanged (see Section4.3.1). This is also confirmed by the implementation at provincial level etc. (see the following paragraphs).

The overarching goals and objectives for the 14th FYP period, set by the central level plans described above, are translated into more specific goals by various provincial plans. Listed below are three examples of provincial level plans for Shandong, Jiangsu and Hebei. These provinces were selected, as they represent main steel producing provinces in China[1758].

The 14th FYP (2021-25) on Developing Steel Industry in Shandong Province (the '*14th Shandong FYP on Steel*')[1759] commits the province to "*strive to build a steel industry ecology, further optimize the steel industry's layout, further adjust its structure, further consolidate its foundation and further extend its industry chain, and deepen further the integration of the steel industry with the equipment manufacturing industry so as to double the output value of steel and its related products to trillion-scale*"[1760] during the period of the plan's validity. In that regard, the main development objectives in the 14th Shandong FYP on Steel include:

- Increasing the income of main businesses by 10% annually, increasing the proportion of short-process steelmaking to about 20%, and doubling the labour productivity of steel enterprises to 1,500 tons per person per year[1761].
- Exceeding one trillion RMB in the total output value of the steel smelting, rolling, deep processing and distribution industry by 2025 (wherein high-end and high-quality steel shall account for around 50%, high quality deep processing 25%, and the use of scrap steel as raw material 30% of the output value)[1762].

1757 The Plan, Section VIII.(I).

1758 See at: https://finance.sina.com.cn/money/future/roll/2022-01-20/doc-ikyamrmz6317417.shtml (accessed on 3 October 2023).

1759 See at: http://gxt.shandong.gov.cn/module/download/downfile.jsp?classid=0&filename=1f79d908601e479f83707e67b133e347.pdf (accessed on 3 October 2023).

1760 14th Shandong FYP on Steel, Preface.

1761 *Ibid.*, Section II (III)-1.

1762 *Ibid.*, Section II (III)-3.

- Increasing R&D in steel products to over 3% of the business income[1763].
- Creating ten enterprise tech centers at provincial-level and two to three at national level and making breakthroughs in three to five key steel materials yearly[1764].
- As regards industrial layout, the proportion of steel production capacity in the Dongjiakou port of Qingdao, the Lanshan district in Rizhao, the Lingang economic development zone of Linyi, and other coastal areas shall be increased to more than 70%, whereas cities such as Jinan, Zibo, Liaocheng, Binzhou, Weifang and those along the Qingdao-Jinan route shall cut their production as much as possible[1765].
- Finally, the industry's overall energy and water consumption per ton of steel is to decrease below 535 kg of standard coal and 2.85 cubic meters of water, respectively: "*The total energy consumption and intensity will be reduced by more than 5%, the water consumption intensity by more than 10%, and the reuse rate of water to more than 98%*"[1766].

The second example, Jiangsu Work Plan for Layout Optimization in the Transformation and Upgrading of the Steel Industry Throughout the Province (the '*Jiangsu Steel Industry Work Plan*')[1767], was released by the Government of Jiangsu in 2019. With Jiangsu being China's second biggest steel producing province, the Jiangsu Steel Industry Work Plan was issued well before the 14th Raw Materials FYP. Therefore, the Jiangsu Steel Industry Work Plan formally does not implement the 14th Raw Materials FYP but is rather inspired by the 19th CCP Congress (see Section 2.2.4) and President Xi's speech on the development of the Yangtze River economic belt and it implements the Notice of General Office of Provincial Party Committee and General Office of Provincial Government on Issuing the Implementation Opinions on Accelerating the Transformation, Upgrading and High-quality Development of Province's Chemical, Iron, Steel, Coal and Power Industry (document no 2018/32)[1768]. The Jiangsu Steel Industry Work Plan sets several goals regarding the industrial layout, concentration and emissions:

- Optimizing the ratio of steel smelting capacity along the Yangtze River and coastal areas from the existing 7:3 to 5:5 by 2025[1769].
- Enhancing agglomeration in the industry, striving to reduce the number of iron and steel enterprises in the province from 45 to about 20 while also enhancing the production capacity of the top five enterprises to account for 70% of province's steel output by 2020[1770].

1763 *Ibid.*, Section II (III)-4.

1764 *Ibid.*

1765 *Ibid.*, Section II (III)-2.

1766 *Ibid.*, Section II (III)-5.

1767 Despite the Jiangsu Steel Industry Work Plan not being adopted as part of the 14th FYP cycle, it covers the whole of 14th FYP period (until the end of 2025) and is thus equally relevant as other provincial FYPs. See http://www.jiangsu.gov.cn/art/2019/5/5/art_46144_8322422.html (accessed on 3 October 2023).

1768 See http://www.jiangsu.gov.cn/art/2018/9/5/art_60096_7805753.html (accessed on 3 October 2023).

1769 See Jiangsu Steel Industry Work Plan, Section I (II). available at: http://www.jiangsu.gov.cn/art/2019/5/5/art_46144_8322422.html (accessed on 3 October 2023).

1770 *Ibid.*

- Cutting the total emission of sulphur dioxide, nitrogen oxide and particulate matter in the province's steel industry by 30%, 50% and 50% respectively by 2020[1771].
- Integrating the decentralized smelting enterprises in the Xuzhou region with steel production below 2 million tonnes towards the cluster of leading enterprises[1772].
- The plan further specifies that "*in principle, all relocation and capacity merger and acquisition projects in the province are only allowed to be implemented in coastal areas*"[1773].

To attain these objectives, all relevant departments in the province are required to "*study and introduce more supportive policies in terms of capital, taxation, finance, land, personnel resettlement and debt disposal*"[1774]. Annexes to the Jiangsu Steel Industry Work Plan specify in detail the requirements for adjusting the industrial layout. Annex I[1775] specifies requirements on planning and construction in coastal areas (in coastal deep-water port areas, total crude steel production capacity must reach 8 million tons, effective volume of blast furnaces must be greater than 3 000 m^3 etc.) and on transformation and upgrading in other regions (e.g. iron and steel enterprises with a production capacity of less than 2 million tons or within 20 km from Taihu Lake can only be relocated). Annex II[1776] contains a number of indexes to be adhered to in construction and/upgrading steel plants in different parts of the province (indexes on total capacity of crude steel; land occupation per ton of steel; size, capacity, and height of furnaces and other equipment; energy consumption indexes etc.).

Finally, the third example examined here is the Three-Year Action Plan for Cluster Development of Steel Industry Chain in Hebei Province ('*Hebei Three-Year Action Plan*')[1777], the province with the largest steel production in China. This plan was adopted for the period 2020-2022, before the start of the 14th planning cycle, but reflects the same objectives found in the central-level 14th FYPs. Some examples of objectives in the Hebei Three-Year Action Plan include:

- Constructing a batch of demonstration blast furnaces and converters with a plant size of 3 000m^3 and production capacity of 200 tonnes and above by the end of 2022.
- Supporting and safeguarding downstream industry upgrading, with the share of ordinary low-alloy steel and alloy steel to reach 25% by the end of 2022.
- Accelerating the process of mergers and restructuring to build a large, world-class conglomerate, with the prospect of top 10 producers reaching 65% of the total output by the end of 2022. Efforts were also to be made to set up one or two world-class large groups, three to five powerful regional groups and eight to ten high-end niche enterprise groups.

1771 *Ibid.*
1772 *Ibid.*, Section I (III).
1773 *Ibid.*, Section V (I).
1774 *Ibid.*, Section VI (II).
1775 *Ibid.*, Annex I.
1776 *Ibid.*, Annex II.
1777 Hebei Province Three-Year Action Plan for Cluster Development of Steel Industry Chain, available at: https://huanbao.bjx.com.cn/news/20200717/1089773.shtml (accessed on 3 October 2023).

- In the ambit of optimizing the industrial layout, three relocation projects (involving Shisteel, Laoting and Taihang) were set to have been completed and become operational in 2020. Xuansteel's production capacity was to be closed own in 2021, and the relocation project for the urban steel plant was to be completed in all essential respects in the course of 2022. Furthermore, the province was to focus on building the two major industrial clusters in Qian'an and Wu'an and to promote steady increases in iron and steel production capacity along the ports and railways, focusing on the construction of four high-quality steel production bases in the ports of Caofeidian and Jingtang (Laoting County), Fengnan Coastal Industrial Zone and Bohai New District.
- When it comes to greening of steel production, by 2020, the utilisation and disposal rate of solid wastes such as steel slag, blast furnace slag and sludge was set to reach 100%. By 2022, industrial fugitive emissions were to be greatly reduced, while energy consumption per tonne of steel was to be reduced to below 560 kg of standard coal.

Measures foreseen to ensure attaining these goals included:

- preferential tax policies (e.g. for company merger and reorganisation, for industrial surplus power generation, for comprehensive utilisation of resources, as well as pre-tax deduction of R&D costs, and export refunds),
- active provision of credit support,
- adjusting the land use and urban and rural planning to support the relocation, transformation and development of urban enterprises,
- improving and supervising incentive mechanisms in order to promote differentiated electricity pricing, water pricing and production outage and limitation policies to encourage enterprises to move towards green, smart, high-end production.

While the research has not revealed specific information to show to what extent the objectives spelled out in the Hebei Three-Year Action Plan have been reached by the end of 2022, what matters in the context of this Report are the interventions by the various levels of government in the economy, shaping all relevant aspects of the steel sector in the province.

The above clearly shows that the goals and objectives of provincial-level planning are closely aligned with the objectives of central-level plans for the 14th FYP period even though in the case of Jiangsu and Hebei provinces, their Work Plan and Action Plan were released already during 13th planning cycle. The plans describe in detail the development objectives the steel industry should follow, most importantly in terms of capacity and layout optimization. All this evidence points to the existence of a high degree of government intervention into the sector. The provisions of these provincial plans are an example of the extremely limited space left to the market to shape the steel sector.

14.1.3. Green Policies

As mentioned in Section 14.1.1.3, greening of the steel sector is high on the agenda in the 14th planning cycle. The importance of the greening of the steel industry is reflected in numerous incentives and policies put in place by various levels of government to promote this objective. A number of documents laying out these measures are examined below.

The Industrial Green Development during the 14th FYP Period[1778] announced that the green and low-carbon development in traditional industries such as iron and steel should be promoted. The same document informs that 620 million tons of crude steel capacities already started the process of ultra-low emission upgrading by the end of the 13th FYP period. The document puts in place several targets for greening the steel production and states that by 2025, China's production capacity of steel with ultra-low emissions is expected to reach 530 million tons, i.e. about 52% of its 2022[1779] estimated capacity.

The adoption of the 14th FYP on Developing Scrap Steel Industry (see Section 14.1.1.4 for more details) is another indicator for the importance that the Chinese authorities attribute to the green development of the steel industry.

The 14th Raw Materials FYP contains a full chapter dedicated to "*Accelerating Green Industrial Development*" in which the authorities promote the active implementation of energy-saving and carbon-cutting initiatives. The Plan contains concrete measures for accelerating green industrial development in the steel sector. The most important ones are:

- implementation plans for "*the accomplishment of peaking carbon emissions*" in key sectors, such as steel, which are to be formulated to ensure carbon emissions peak before 2030[1780];
- enterprises are to be supported to substitute raw materials and fuels, speed up the replacement of coal with electricity and natural gas in the industry, increase the proportion of renewable resources and clean energy in energy consumption, and generate electricity and develop grid-connected systems through employing residual heat and pressure;
- support is to be given to key sectors such as steel to establish statistical, accounting, monitoring and evaluation systems for carbon emissions throughout production[1781];
- efforts are to be made to accelerate the transformation and upgrading of raw materials enterprises in energy conservation and carbon emission reduction;
- oversight over energy conservation in key sectors is to be intensified and mandatory standards on energy consumption caps per unit product are to be implemented; services designated to evaluate energy-saving projects in the industry are to be provided;
- measures are to be taken to strictly implement tiered pricing for electricity in key sectors, such as steel, and improve the differentiated electricity pricing policy with the aim of promoting green and low-carbon development[1782];
- pilot projects of low-carbon manufacturing and advanced technologies in the following areas of the steel sector are to be promoted: application of recycled steel materials, short-process near net shape cast-rolling, and bio-metallurgy of low-grade resources[1783];

1778 Industrial Green Development during the 14th FYP Period, MIIT, available at: http://www.gov.cn/zhengce/zhengceku/2021-12/03/content_5655701.htm (accessed on 3 October 2023).

1779 According to Worldsteel.

1780 The Plan, Section V.(I).

1781 *Ibid.*

1782 *Ibid.*

1783 *Ibid.*, Section V (I), Feature 3.

- steel sector enterprises are to be encouraged to launch in-house water-saving reconstruction[1784].

The 14th Raw Materials FYP also puts in place numerous incentives and support measures for the greening of the steel sector. Its chapter "*Accelerating Green Industry Development*" contains the objective, mentioned already in Section 14.1.2, to improve "*the mechanism for determining resource prices*"[1785], an element which demonstrates clearly the pervasive role of the authorities also in the area of green development for the steel sector.

According to Steel Industry Development GO, the steel industry is the key field that contributes to green and low-carbon development in general. The document identifies unfledged green and low carbon development as one of the major challenges in the 14th FYP period. Several goals and policies are thus laid out to deepen green and low-carbon development of the steel industry:

- pressing ahead with the coupling of sectors to build a system for the recycling of resources;
- promoting the transformation covering over 80% of the steel enterprises to achieve ultra-low emissions;
- cutting per ton of steel total energy consumption by more than 2%, water consumption by more than 10% and ensure the goal of peaking carbon emissions by 2030;
- reducing or shutting down the less competitive existing urban steel mills that are unable to meet the requirement of ultra-low emissions;
- policies for differentiated capacity replacement and environmental protection and management should be implemented in all-scrap electric furnace steelmaking projects;
- efforts should be intensified to promote small and medium-sized electric furnace steel enterprises in line with the requirements of energy conservation and environmental protection;
- promoting the integrated development of recycling, dismantling, processing, classification, and distribution of scrap steel for the construction of a system for better scrap steel processing and distribution[1786].

Developing electric furnace steelmaking appears to be an important item in green policies. The Steel Industry Development GO presents it as one of the major development goals and plans to guide that development in the following ways:

- encourage well-placed enterprises featuring blast furnace-converter prolonged processes to transform, upgrade and develop into electric furnace short-process steelmaking locally;
- well-placed areas should be encouraged to construct demonstration areas for electric furnace steel development and explore the application of innovative technologies and new equipment;

1784 *Ibid.*, Section V (II).
1785 *Ibid.*, Section V (III).
1786 Steel Industry Development GO, Section II (VIII).

- eight or so dominant and benchmarking enterprises in electric furnace steelmaking and scrap steel processing and distribution should be selected respectively to form a promotable industrial model[1787].

In addition, to deepen green and low-carbon development, the Steel Industry Development GO foresees also the following actions:

- make efforts to implement the plan for carbon peaking in the iron and steel industry;
- support the establishment of the alliance for innovation in low-carbon metallurgy, formulate an action plan for hydrogen metallurgy and accelerate the application of low-carbon smelting technologies;
- support the construction of a system for carbon emission data management throughout the process of iron and steel production and participate in the national carbon emissions trading markets;
- provide industrial energy-saving diagnostic services and support enterprises to increase the share of green energy use;
- promote the transformation of the steel sector to achieve ultra-low emissions in all respects, accelerate clean transportation in iron and steel enterprises and improve the differentiated electricity pricing policy (conducive to green and low-carbon development);
- press ahead with the coupling of sectors including steel and improve the comprehensive utilization efficiency of solid waste resources;
- establish and improve the evaluation system for steel products with the green design to guide the upgrading of steel used in downstream industries.

In an economy based on market forces, a number of these actions would be carried out by private companies. In China, instead, the authorities do not limit themselves to setting the regulatory framework and/or promoting these actions but are the main actor in realising them.

Another example in this respect represents the State Council Notice on the Action Plan for Continuous Improvement of Air Quality[1788], adopted in December 2023. The Notice promotes ultra-low emission transformation of key industries such as steel, cement and coking as well as coal-fired boilers with high quality. Among its main objectives feature the optimization of industrial structure, the promotion of green upgrading of industrial products, as well as the in-depth pollution control in key industries. Correspondingly, the actions foreseen in the Notice include to "*resolutely curb the blind launch of high-energy-consuming, high-emission, and low-level projects*". This target is not new. Years ago, the VTA export exemption policy was already applied in a way making it more difficult for high energy intensive and low-level products to be exported. The Notice also envisages the revision of the Guiding Catalogue for Industrial Structural Adjustment (see Section 4.2.9) in order to include processes and equipment whose

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1787 *Ibid.*, Section II.(VIII).

1788 State Council Notice on the Action Plan for Continuous Improvement of Air Quality, December 2023, No 24, available at: https://www.gov.cn/zhengce/content/202312/content_6919000.htm (accessed on 18 December 2023).

pollutant or greenhouse gas emissions are significantly higher than the industry average and have low energy efficiency and clean production levels into the elimination and restricted lists.

Other instruments, such as the 14th FYP on promoting nationwide clean production[1789], also show the importance that the authorities attach to the green development. According to this plan, effective ways will be explored to support cleaner production by financial departments at all levels. The plan mentions also preferential taxation policies related to energy and water conservation and environmental protection which are to be implemented and improved.

Regional plans and policies also put in place measures to promote greening of the steel industry. The 14th FYP of Hebei on the green development of industry[1790], which also covers steel, is a good example. It foresees the following incentive measures:

A. Strengthen financial and tax support:

- *coordinate the use of relevant industry funds and specific financial funds such as provincial industry transformation and upgrade (technological transformation) funds, strategic and emerging industry development funds and innovation funds;*
- *concentrate strong support towards technology transformation demonstration programmes in the field of energy-saving and low-carbon, water-saving, comprehensive use of resources as well as towards the development of energy-saving and environmental protection industries;*
- *actively implement all national tax preferential policies supporting energy-saving and emission reductions, foster the implementation of preferential policies concerning income tax and VAT for products related to the comprehensive use of resources, and in accordance with the regulations released by the Ministry of Finance, energy saving products shall be included in the scope of policy support for governmental procurement;*
- *strictly implement differentiated electricity prices and punitive electricity prices, explore the possibility to release comprehensive price policies encouraging industry energy saving.*

B. Develop green finance:

- *encourage financial institutions to develop financial products for the green transformation of key industries such as steel and petrochemicals as well as for the production and use of green building materials and new energy vehicles, for the promotion of green products etc.;*
- *actively explore the possibility to include energy use rights, carbon emission rights, polluting emission rights, future benefits resulting from contractual energy management, rights and fees resulting from licensed operations into the scope of funding pledge guarantees;*

1789 14th FYP on promoting nationwide clean production, available at: http://www.gov.cn/zhengce/zhengceku/2021-11/12/content_5650430.htm (accessed on 3 October 2023).

1790 Hebei 14th FYP on the green development of industry, available at: https://news.bjx.com.cn/html/20220107/1198177.shtml (accessed on 3 October 2023).

- *encourage eligible enterprises to issue middle and long-term green bonds;*
- *support eligible green enterprises to get listed for financing and refinancing and to reduce financing costs;*
- *encourage social capital to set up green development funds and guide business angel investments, venture capital and private equity investment funds towards green crucial core technology research and other fields;*
- *optimize and improve insurance subsidy schemes for the first installation of large size technological equipment and for the first use of key new materials and support the use of eligible green low-carbon technology and equipment and green materials.*

In sum, the Chinese authorities are actively supporting the green development of the steel industry both at national and provincial level. The support takes various forms including financial support.

14.1.4. SCRAP STEEL RESOURCES

The development of the scrap steel recycling remains a priority for the 14th FYP period[1791], in line with the objective to promote the steel industry's green development. The Steel Industry Development GO foresees to greatly improve resource security. Accordingly, efforts shall be made to significantly enhance diversified resource security and perfect the scrap steel recycling and processing system by large to achieve a remarkable increase of the utilization rate and ensure that the scrap steel resources utilized by the steel industry exceed 300 million tons.

The degree of planning into the steel scraps sector further demonstrates just how all-encompassing the Chinese government's intervention in the steel industry aims to be. As explained in the 14th Raw Materials FYP, "[e]*nterprises will be supported to substitute raw materials,* [...] *increase the proportion of renewable resources* [...]". The 14th FYP on Circular Economy[1792] sets the goal of achieving the annual utilization rate of 320 million tonnes of scrap steel. Moreover, the 14 FYP on Developing Scrap Steel Industry[1793] (the '*Scrap Steel FYP*') was issued by the Scrap Steel Industry Association. Although formally not issued by a government entity, it forms an important part of the planning system, given the prominent role that industry associations have in China (see Section 2.3.3) and the explicit allegiance to the CCP and the Government which these associations pledge in their statutes[1794].

The Scrap Steel FYP sets the development agenda expecting continued demand for infrastructure steel and raising demand for high-end steel products[1795]. The ratio of scrap steel utilization in the steelmaking process has been rising continuously, from 11.3% during the 12th

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1791 See the 14th Raw Materials FYP, Section VIII.(I), and Steel Industry Development GO, Sections I.(III) and II.(VIII).

1792 14th FYP on Circular Economy, available at: https://www.ndrc.gov.cn/xwdt/tzgg/202107/P020210707325480706163.pdf (accessed on 23 February 2022).

1793 Available at: http://www.csteelnews.com/xwzx/jrrd/202109/t20210917_55000.html (accessed on 23 February 2022).

1794 See at: https://www.camu.org.cn/ (document accessed via Baidu on 25 May 2023).

1795 Scrap Steel FYP, Foreword.

FYP period, to 21.8% in 2020[1796], and the Scrap Steel FYP sets the following main objectives for the future:

- reach 30% ratio of scrap steel utilization in the steelmaking process by the end of the 14th FYP period;
- reach 200 million tonnes of annual processing capacity of scrap iron and steel;
- improve industrial concentration and cultivate leading enterprises in scrap steel industry;
- develop scrap iron and steel price index to guide spot market prices[1797].

The Scrap Steel FYP also predicts several demonstrations and R&D projects: deploying blockchain operation management system, project for dismantling scrapped automobiles, "*zero discharge of iron and steel slags*" project, research into slag micro powder replacing cement for certain uses, etc.

The Scrap Steel FYP shows that the Chinese authorities play an active and intrusive role in the development of scrap steel resources. This could be considered as part of their efforts to ensure green development for the steel industry.

14.2. ACTORS ON THE STEEL MARKET – SOES AND PRIVATE-OWNED STEEL ENTERPRISES FOLLOWING GOVERNMENT POLICY

The State's presence in the steel sector is very important, also given that it is *"a fundamental pillar industry of the national economy"*[1798] in China.

The general description of SOEs and their role in the overall setup of the Chinese economy can be found in Chapter 5. In the case of the steel sector, SOEs play a central role. According to the most recent information available as of writing of this Report, the split between SOEs and privately owned companies is estimated to be almost even in the Chinese steel sector - 60% private and 40% SOEs both in terms of production, as well as capacity [1799]. Six Chinese steel producers (four of which are SOEs) are ranked in the top 10 of the world's largest steel producers[1800]. This shows that the Chinese steel market is characterized by significant presence of large SOEs. In addition, there is also a significant presence of SOEs in the mining industry,

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1796 *Ibid.*, Section 1.(1)-1.

1797 *Ibid.*, Section 2.(2).

1798 See Introduction of the 2023 Work plan on the stable growth of the steel industry, available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2023/art_2a4233d696984ab59610e7498e333920.html (accessed on 3 October 2023).

1799 See statistics from China Chamber of Commerce for Metallurgical Enterprises (2022), available at: https://m.mysteel.com/23/0322/07/1178B5B47DFE3182_abc.html (accessed on 3 October 2023). See also an interview with Bayi Steel, a subsidiary of Baowu Steel (September 2022) https://mp.weixin.qq.com/s?__biz=MzA3OTE5NDYwOA==&mid=2649832255&idx=2&sn=f2e10146390b50e80a732ca83d03cd47&chksm=87b2aba0b0c522b6ad44d379d243d24de25fc719e872454c02cf6639fb6affe654757801775c&scene=27 (accessed 26 May 2023).

1800 World Steel Association. (2022). *Top steel-producing companies* World Steel in Figures 2022 - worldsteel.org (The four SOEs are: China Baowu Group, HBIS Group, Ansteel Group and Shougang Group).

which provides key raw materials for steel production[1801]. For example, large steelmaking SOEs like Anshan Iron & Steel Group Corporation and Benxi Steel, also own iron ore mines[1802].

When it comes to the performance and efficiency of the steel SOEs, according to an OECD study[1803], Chinese steel SOEs tend to exhibit poorer financial performance compared to privately-owned enterprises ('*POEs*'). At the same time, Chinese SOEs received more subsidies per metric tonne compared to their private counterparts. Amongst SOEs, larger enterprises tend to receive more subsidies compared to smaller ones. This illustrates the consolidation efforts of the Chinese authorities and demonstrates that the Government is favouring larger SOEs in order to create world-class steel conglomerates (see Section 14.1.2). SOEs were also more likely than POEs to leverage important subsidy amounts to create new capacity. Subsidisation therefore led to an increase of the Chinese steelmaking capacity and only aggravated the already significant overcapacity problem.

As concluded in Chapter 5, SOEs are used as vehicles to pursue the government's economic policies. This is also the case in the steel industry, as also confirmed in several Commission's TDI investigations which established, inter alia, the following: the Government exercises meaningful control over steel SOEs, which are obliged to follow the governmental plans and policies[1804]; SOEs exercise government authority[1805]; the main objective of steel SOEs is to reach the targets and objectives set by the Government's plans[1806].

Indeed, SOEs are the primary target of state policies aiming at restructuring and consolidating the steel sector by creating fewer but larger steelmakers[1807]. Some examples of how these policies are being implemented include, on the one hand, the reportedly economically nonviable merger between Baosteel and Wuhan Steel, which gave rise to the largest steel producer of the world[1808], Baowu Steel Group[1809], and, on the other hand, the refusal for a merger between Shougang Corporation and Hesteel Group Co., Ltd, allegedly prohibited on the basis that there was "*neither an agenda nor a directive for that in the State Council document*"[1810].

With the high level of government intervention in the steel industry and a high share of SOEs in the sector, even privately-owned steel producers are prevented from operating under market

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1801 OECD (2012) *Steelmaking Raw Materials: Market and Policy Developments*.

1802 See top 10 list at: OECD. (2012). *Steelmaking Raw Materials: Market and Policy Developments*, table 12.

1803 OECD (2022). *State-owned enterprises and subsidisation in the steel sector: evidence from China*.

1804 Council Implementing Regulation (EU) No 215/2013 of 11 March 2013 imposing a countervailing duty on imports of certain organic coated steel products originating in the PRC, recital 72, OJ L73, 15.3.2013, p.16.

1805 *Ibid.*

1806 *Ibid.*, recital 68.

1807 In particular: Guiding Opinions on Pushing Forward Enterprise Mergers and Acquisitions and Reorganization in Key Industries (2013); Steel Industry Adjustment Policy (2015 Revision) and The Plan for Adjusting and Upgrading the Steel Industry (2016-2020).

1808 World Steel Association (2021). *Top steel-producing companies*. Top Producers - worldsteel.org, available at: https://www.worldsteel.org/steel-by-topic/statistics/top-producers.html (accessed on 9 March 2023).

1809 See Baowu website: http://www.baowugroup.com/en/contents/5319/104013.html (accessed on 3 October 2023).

1810 Bloomberg. Company Overview of Shougang Group Co., Ltd http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapid=5471051 (accessed on 9 March 2023).

conditions. In this regard, the Commission found, in the anti-subsidy investigation on *Organic Coated Steel* from China[1811] ('*OCS*') inter alia, that[1812]:

> *The SOEs are predominant in the HRS* [hot-rolled steel] *market in China. This predominance of SOEs in the HRS market is so considerable that the private producers have no choice but to align their prices with the SOEs.*
>
> *The investigation at the exporters of OCS established that the prices paid by the four exporting producers/groups during the IP for the HRS and CRS* [cold- rolled steel] *sourced from private producers of HRS and CRS or from traders were consistently very close to the prices of SOEs. Thus, the observed data, together with the predominance of SOEs in this sector, demonstrates that the price of private suppliers effectively tracks the prices paid to SOEs. Furthermore, in the contract submitted by one of the sampled exporting producers for the provision of HRS by a privately owned supplier there is even a condition to link the price to the SOE supplier price.*
>
> *The government export restriction, government planning and the predominance of SOEs limits the freedom of private suppliers of HRS and CRS, obliging them to act in a non-commercial manner and to accept economically irrational (below- market) prices which they would not do in a free and open market. This confirms that the government policy to supply HRS and CRS (including to the organic coated steel sector) extends to private suppliers.*

The following statement by one of the country's largest private steel producer, Jiangsu Shagang, also serves as an illustrative example of how even private companies adhere to government policies[1813]:

> *In the future, Shagang Group will conscientiously implement the State policy concerning the steel industry development. With the guideline of the Scientific Concept of Development, Shagang would persistently follow the development strategy of "Doing the Steel Industry Finer and Stronger, Doing the Modern Logistics Stronger and More Excellent, Doing the Non-Steel Industry better and more sufficient". Shagang shall continuously speed up its pace of the transformation and upgrading, and constantly enhance its comprehensive competitiveness. Shagang Group will make new contributions in order to forge a "Hundred-year-Old Factory", construct a harmonious Jiangsu and build a powerful steel country.*

1811 Council Implementing Regulation (EU) No 215/2013 of 11 March 2013 imposing a countervailing duty on imports of certain organic coated steel products originating in the People's Republic of China, *OJ L 73, 15.3.2013, p.15.*

1812 *Ibid.*, recitals 77, 80 and 97.

1813 See Shagang Group website: http://www.sha-steel.com/eng/ (accessed on 3 October 2023).

This is consistent with older sources which already years ago pointed to the existence of substantial ownership, control and/or government intervention with respect to POEs [1814].

14.3. FINANCIAL SYSTEM IN CHINA – IMPACT ON THE STEEL SECTOR

Chapter 6 described in detail the functioning of the banking and overall financial sector in China. Therefore, for the purpose of this Chapter only the financial sector's most relevant features concerning the steel industry are highlighted.

The Commission found in the anti-subsidy investigation into *Hot-Rolled Flat products* from China ('*HRF*')[1815] that '*The Guidelines of the People's Bank of China, CBRC, CSRC, and CIRC*', as well as the notice '*Several Opinions on Resolving Overcapacity*', are specifically targeted at companies in the steel sector[1816]:

> *financial institutions must fully recognize the pillar role and strategic importance of steel and coal industries and continue to give credit support to the steel companies which comply with industrial policy and which adjust and regroup themselves without increasing their production capacity. This support shall extend to the setting of interest rates and the promotion of bonds and loans for mergers and acquisitions. Furthermore, debt restructuring and debt forgiveness is promoted.*

The Commission concluded that state-owned financial institutions, in implementing the relevant regulatory framework in China, exercise governmental functions with respect to the steel sector and therefore act as public bodies within the meaning of the basic Regulation and in accordance with the relevant WTO case-law[1817].

In addition, the Commission found that "*in so far as the steel industry is concerned, all financial institutions (including private financial institutions) operating in China under the supervision of the CBRC have been entrusted or directed by the State to pursue governmental policies and provide loans at preferential rates to the steel industry*"[1818].

1814 Price, A.H., Brightbill, T.C., Weld, C.B. and Nance, D.S. (2007). *Government ownership and control of China's "private" steel producers*; available at: https://www.lexology.com/library/detail.aspx?g=806b748a-5820-4607-9ffe-fb3ab9adb09f (accessed on 3 October 2023).

1815 Commission Implementing Regulation (EU) 2017/969 of 8 June 2017 imposing definitive countervailing duties on imports of certain hot-rolled flat products of iron, non-alloy or other alloy steel originating in the People's Republic of China and amending Commission Implementing Regulation (EU) 2017/649 imposing a definitive anti-dumping duty on imports of certain hot-rolled flat products of iron, non-alloy or other alloy steel originating in the People's Republic of China, *OJ L 146, 9.6.2017, p. 17–128*. The findings in this regulation related to the financial system in China and its impact on the steel sector were confirmed in the more recent expiry review investigation to extend the measures on HRF which resulted in Regulation 2023/1123 of 7 June 2023 imposing a definitive countervailing duty on imports of certain HRF of iron, non-alloy or other alloy steel originating in PRC following an expiry review pursuant to Article 18 of Regulation (EU) 2016/1037 of the European Parliament and of the Council, *OJ L 148, 8.6.2023, p. 84–120*.

1816 *Ibid.*, recital 113.

1817 *Ibid.*, recitals 129 and 139: "*the investigation found that all 35 state-owned Chinese financial institutions that provided loans to the four sampled groups of cooperating exporting producers are public bodies*".

1818 *Ibid.*, recital 146.

Overall, the Commission concluded that "*the government has exercised meaningful control over the conduct of the five cooperating state-owned banks with respect to their lending policies and assessment of risk, where they provided loans to the steel industry*"[1819].

The government control over banks has a direct influence on the manner in which loans, credits and access to finance in general, is provided to steel producers. It is therefore the government's control over the financial sector that, inter alia, has created the so-called '*zombie companies*' and therefore, played a major role in the severe overcapacity problem to which China is the main contributor globally.

The above Commission's findings clearly show that Chinese steel producers benefit from State support measures from financial institutions, typically by access to finance at non-commercial terms. This preferential and concessionary access to capital gives Chinese steel companies the ability to lower their costs relative to their counterparts overseas.

14.4. STATE SUPPORT MEASURES

The Government has consistently used a wide array of state support measures, including - but going also beyond - the financial support described in Section 14.3, to promote the steel industry, and hence, to implement the industrial policy objectives. These measures grant an artificial advantage to the recipients, *vis-à-vis* those competitors who do not benefit from the measures, thereby contributing to an uneven playing field. The Commission, as well as other investigating authorities, have consistently found evidence of these measures, as described below.

The Commission has established that the Government provided numerous forms of state support, some of which were found to be of a permanent and structural nature in the steel sector. In the HRF investigation, it was established that[1820]:

> *Most of them* [support schemes investigated] *are permanent by nature, such as land use rights, tax breaks and grant programmes. Moreover, the credits received were a constant feature of Chinese industrial policy to support its steel industry. The Commission concluded that these subsidies were of structural nature.*

More specifically, several Commission anti-subsidy investigations determined that Chinese steel producers benefit from numerous subsidy schemes, within the following main categories[1821]:

- preferential policy loans, credit lines, preferential interest rates, other financing, and guarantees;

1819 *Ibid.*, recital 128.

1820 Commission Implementing Regulation (EU) 2017/969, recital 476. The findings of Regulation (EU) 2017/969 were confirmed in the expiry review resulting in Regulation 2023/1123 of 7 June 2023 imposing a definitive countervailing duty on imports of certain HRF of iron, non-alloy or other alloy steel originating in People's Republic of China following an expiry review pursuant to Article 18 of Regulation (EU) 2016/1037 of the European Parliament and of the Council.

1821 A complete list of all subsidy schemes found countervailable in each of the investigations referred to in this section, is available in the relevant texts cited, in particular recitals 49-126 of Regulation (EU) 2023/1123 and recitals 46-203 of Regulation (EU) 2019/688.

- grants;
- direct tax exemption and reduction programmes;
- indirect tax and import tariff programmes;
- Government provision of goods and services for less than adequate remuneration ('*LTAR*'), including inputs, land use rights, water and electricity;
- equity programs, including debt for equity swaps, equity infusions and unpaid dividends.

Other investigating authorities have also found that Chinese steel producers have consistently received numerous subsidies:

In 2021 the Australian investigating authority finalised two anti-subsidies investigations. In the one on *Precision pipe and tube steel*[1822], the authority determined that the following countervailable subsidies had been provided to Chinese steel producers:

- Program 20: a form of subsidy where a public body provides goods or services at LTAR price levels.

In the one on *Painted steel strapping*[1823], the authority determined that subsidy schemes within the following categories were countervailable:

- preferential tax policies for enterprises with foreign investment established in the coastal economic open areas and economic and technological development zones.
- one-time awards to enterprises whose products qualify for '*well-known trademarks of China*' and '*famous brands of China*';
- matching funds for international market development for small and medium enterprises;
- R&D assistance grant;
- patent award of Guangdong province;
- preferential tax policies for foreign invested enterprises– reduced tax rate for productive foreign invested enterprises scheduled to operate for a period of not less than 10 years;
- preferential tax policies for enterprises with foreign investment established in special economic zones (excluding Shanghai Pudong area);
- preferential tax policies for enterprises with foreign investment established in Shanghai Pudong area;
- preferential tax policies in the Western regions;
- tariff and VAT exemptions on imported materials and equipment;
- other subsidies.

In its *Certain cold-rolled steel from China*[1824] investigation in 2018, the Canadian authority determined that countervailable subsidies within the following categories had been provided to Chinese steel producers:

1822 Australian Anti-Dumping Commission, available at: https://www.industry.gov.au/trade/anti-dumping-review-panel/past-anti-dumping-review-panel-reviews/precision-pipe-and-tube-steel-exported-peoples-republic-china-and-socialist-republic-vietnam (accessed on 3 October 2023).

1823 Australian Anti-Dumping Commission, available at: www.industry.gov.au/anti-dumping-commission/archive-cases-and-electronic-public-record-epr/553 (accessed on 3 October 2023).

1824 See *Cold-Rolled Steel 2018 Investigation*, available at: https://www.cbsa-asfc.gc.ca/sima-lmsi/i-e/crs2018/crs2018-fd-eng.html (accessed on 3 October 2023).

- loans from state-owned banks at preferential rates;
- loan guarantee through the government of China/state-owned banks/public bodies;
- debt and interest forgiveness on loans from state-owned banks;
- preferential export financing and export credit guarantee/insurance;
- design, R&D grants;
- export performance grants;
- reductions in land use and /or rental fees;
- grants for the retirement of capacity;
- grants for relocating production facilities;
- interest subsidy for the importation of encouraged products and technology;
- financial subsidy from various levels of governments;
- corporate income tax exemption and/or reduction in special economic zones and other designated areas;
- corporate income tax reduction for high and new tech enterprises;
- corporate income tax reduction for newly profitable enterprises;
- preferential tax policies for foreign-invested enterprises;
- preferential tax policies related to research and investment;
- offsets to taxable income related to purchases of domestic machinery;
- exemption or refund of tariff and import VAT for imported technologies and equipment;
- offset of taxable income on purchases of domestic equipment;
- acquisition of government assets at less than fair market value;
- provision of land for LTAR by government;
- debt-to-equity swaps for less than fair market value;
- other subsidies.

Since the publication of the 2017 version of this Report, the US International Trade Administration (*'US ITA'*) finalized twelve anti-subsidy investigations in the steel sector against China[1825]. In these investigations, the investigating authority determined that among many others the following countervailable subsidies categories had been provided to Chinese steel producers:

- policy loans;
- export seller's credits;
- export buyer's credits;
- income tax reduction for high and new tech enterprises;
- income tax deductions for R&D;
- import tariff and VAT exemptions on imported equipment for encouraged industries;
- provision of electricity for LTAR;

[1825] See the WTO Trade Remedies Portal at: https://trade-remedies.wto.org/en/countervailing/measures#eyJpbml0WWVhcnMiOltdLCJpbkZvcmNlRnJvbVllYXJzIjpbXSwicmVwb3J0aW5nTWVtYmVycyI6W3siY29kZSI6IkM4NDAiLCJsYWJlbCI6IlVuaXRlZCBTdGF0ZXMifV0sImV4cG9ydGluZ01lbWJlcnMiOlt7ImNvZGUiOiJDMTU2IiwibGFiZWwiOiJDaGluYSJ9XSwiaHNTZWN0aW9ucyI6W10sImluRm9yY2UiOiJpbl9mb3JjZSIsInN1YmplY3RQcm9kdWN0Ijoic3RlZWwifQ (accessed on 3 October 2023).

- provision of goods for LTAR;
- provision of LUR in industrial and other special economic zones for LTAR;
- other subsidies.

The investigations cited above are not an exhaustive list, as there are other investigating authorities that have also found the existence of countervailable subsidies on Chinese steel products[1826].

The findings by investigating authorities in the selected cases listed above confirm the presence of a wide range of State support measures in the Chinese steel sector, clearly illustrating how the Government actively implements the policy and industrial objectives set out in the planning and other policy documents for the steel sector. Through the provision of State support measures, Chinese steel producers achieve significant reductions in their costs of production for some key elements, e.g. raw materials, LUR, electricity and water. In this respect, it is noted that steel production is energy intensive and therefore energy is a key input for steel producers. Consequently, Government intervention in the energy sector has led to market distortions (see Chapter 10), impacting on the cost and prices of steel products. The provision of State support measures also has an impact on the financial situation of the companies. For instance, through preferential lending, debt for equity swaps, or debts cancellations, the viability of companies, which would otherwise have been forced to file for bankruptcy under commercial considerations, is ensured. As some of these State support measures have been found to be of a structural nature (see e.g. the abovementioned HRF investigation), this situation is not likely to change any time soon.

14.5. RAW MATERIALS AND INPUTS DISTORTIONS

As explained in Chapter12, the Government has consistently implemented numerous export restrictions on a broad range of raw materials, having a distortive effect on the market[1827]. These export restrictions have also affected several key raw materials in steelmaking[1828]. The restrictions have taken the form of non-automatic export licensing requirements and export duties. The following examples illustrate the export restrictions that China has imposed on steelmaking raw materials in recent years [1829]:

- export licensing requirements (non-automatic licensing) for coke, coking coal, manganese, chromium, molybdenum, silicon and vanadium;
- export taxes on export of metal waste and scrap, nickel, pig iron, tin, tungsten and zinc.

1826 Some recent examples include: India – "Stainless steel welded pipes" - case No. 6/22/2018- DGAD 1/2 (2018); Brazil-"Hot-rolled steel"- case No 1601160; Chinese Taipei – "Certain flat-rolled steel products, plated or coated with zinc or zinc –alloys" - case No 18-0003-CHN; UK – "Hot-rolled flat, products of iron, non-alloy or other alloy steel"- case No 2020/15CN (original investigation –European Union (ID AS634CN) etc.

1827 In addition to the findings of the investigations described below in this section, see other restrictions at: OECD Raw Materials Inventory: Export restrictions on Industrial Raw Materials (oecd.org) (accessed on 3 October 2023).

1828 For a list with the main steelmaking raw materials see OECD (2012). *Steelmaking raw materials: market and policy developments.* Directorate for Science, Technology and Industry, Steel Committee. https://www.oecd.org/sti/ind/steelmaking-raw-materials.pdf, p. 8-9 (accessed on 3 October 2023).

1829 OECD, data for 2021 available at: http://www.compareyourcountry.org/trade-in-raw-materials?cr=oecd&lg=en&page=0 (accessed on 3 October 2023).

These measures, which have spanned over many years, confirm the persistent government intervention with respect to raw materials for steelmaking. In addition, in the past, some of export restrictions have been removed by China as a result of adverse WTO rulings, which found the restrictions to be inconsistent with WTO law[1830].

The restrictions impacting raw materials often have an impact on the downstream market, as found in various trade defence investigations. The Commission, in *OCS from China*[1831], established that the Government exercised significant control over the market for raw materials. The Commission concluded that there are distortions in the markets of a number of raw materials used for the production of OCS such as: domination of SOEs in the zinc, coal and iron ore mining industry and a 30% export tax on zinc[1832]. Therefore, the Commission concluded that the Chinese steel market was distorted due to significant State interference including in relation to the costs of raw materials as these were not the result of free market forces because they are affected by substantial government intervention[1833].

In its investigation concerning heavy plates[1834], the Commission further found that the Chinese State had a primary role in the setting of prices of raw materials for heavy plate (namely steel and iron ore). With regard to steel, the Commission found that "*in the sector of the product under review, i.e. the steel sector, a substantial degree of ownership by the GOC persists.* [...] [T]*he investigation confirmed that the two largest producers in the steel sector, namely Angang Steel Group* [...] *and Baowu are either fully state-owned or the State holds a controlling stake*"[1835]. Moreover: "[b]*oth public and privately owned enterprises in the steel sector are subject to policy supervision and guidance. The latest Chinese policy documents concerning the steel sector confirm the continued importance which GOC attributes to the sector, including the intention to intervene in the sector in order to shape it in line with the government policies*"[1836].

With regard to the other important raw material used for the production of heavy plates, i.e. iron ore, the Commission pointed out: "*Iron ore is also mentioned in the 14th FYP on Developing the Raw Materials Industry, in which the State plans to "rationally develop domestic mineral resources. Strengthen the exploration of iron ore* [...], *implement preferential tax policies, encourage the adoption of advanced technology and equipment to reduce the generation of mining solid waste."*[1837] In sum: [r]*he GOC has measures in place to induce*

1830 See e.g. Appellate Body Report on the case China — Measures Related to the Exportation of Various Raw Materials (WT/DS394/AB/R, WT/DS395/AB/R and WT/DS398/AB/R).

1831 Commission Implementing Regulation (EU) 2019/687 of 2 May 2019 imposing a definitive anti-dumping duty on imports of certain organic coated steel products originating in the People's Republic of China following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council, *OJ L116, 3.5.2019, p.5*.

1832 *Ibid.*, recital 72.

1833 *Ibid.*, recital 92.

1834 Commission Implementing Regulation (EU) 2023/968 of 16 May 2023 imposing a definitive anti-dumping duty on imports of certain heavy plate of non-alloy or other alloy steel originating in the PRC following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council, *OJ L133, 17.5.2023, p.214*.

1835 *Ibid.*, recital 98.

1836 *Ibid.*, recital 99.

1837 *Ibid.*, recital 107.

operators to comply with the public policy objectives of supporting encouraged industries, including the production of the main raw materials used in the manufacturing of the product under review. Such measures impede market forces from operating freely"[1838].

Overall, consistent government intervention in the steelmaking raw materials market exists for the benefit of the steel industry and it has market-distortive effects. The investigations mentioned above confirmed that due to these distortions, the price formation mechanisms of the steel products that incorporated these raw materials were not *substantially* the same as they would have been in a market without the government's intervention. Therefore, Chinese steel producers have consistently benefitted from an unfair and artificial advantage.

14.6. OVERCAPACITY

Introduction

In the period 2006-2016, boosted mainly by real estate and large infrastructure projects (and by stimulus packages by the Government to overcome the financial crisis, where growth and demand weakened), China increased its steel production capacity by over 675 mmt. This amounts to around 73% of the worldwide capacity increase in the same period[1839]. In 2005, China's capacity was estimated at around 30% of the world's total steel capacity. By 2015, it already accounted for around 50%[1840] of the total steel capacity.

In 2014 the *overcapacity* in China was estimated at around 300 mmt,[1841] and in 2015 even higher (between 350[1842] and 400 mmt[1843]). To put this figure into context, in 2015 this amount corresponded to the combined production of the EU, Japan and India (the world's three largest producers after China).

Since 2019, when China stopped its participation in the GFSEC, it has become difficult to get precise figures related to the Chinese steel (over)capacity. On the one hand, according to market intelligence, China's iron and steel capacity has been growing quickly since 2019[1844]. Similarly, according to GFSEC estimates, the Chinese crude steelmaking capacity increased in 2019 and

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1838 Commission Implementing Regulation (EU) 2023/968, recital 107.

1839 China's crude steelmaking capacity increased from 488.47 mmt in 2006 to 1 164.55 mmt in 2016. See OECD (2017). *Capacity Developments in the World Steel Industry*; table 1.

1840 Zhiyao, L. (2016). *State of Play in the Chinese Steel Industry*, Peterson Institute for International Economics, Table 1, available at: https://piie.com/blogs/china-economic-watch/state-play-chinese-steel-industry. (accessed on 3 October 2023).

1841 OECD (2015). *Capacity Developments in the World Steel Industry*; http://www.oecd.org/sti/ind/Capacity-Developments-Steel-Industry.pdf *p.16 (317 mmt);* (accessed on 3 October 2023). See also European Chamber of Commerce in China; *Overcapacity in China: An Impediment to the Party's Reform Agenda, p.16 (328 mmt).*

1842 *Steel: Preserving sustainable jobs and growth in Europe*; Communication from the European Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank; COM(2016) 155 final; 16.3.2016, p.2 (fn.2).

1843 Zhiyao, L. (2016). *State of Play in the Chinese Steel Industry.* See also: *The Economist (Intelligence Unit). 2016.* The implications of steel capacity cuts, available at: http://country.eiu.com/article.aspx?articleid=804209864&Country=China&topic=E (accessed on 12 April 2023).

1844 SBB Daily Briefing (10 April 2023).

again in 2020 and 2021[1845]. Moreover, China's pig iron and crude steel capacity has been still marking a modest growth for 2023[1846]. On the other hand, those figures are to a degree contradicted by the OECD figures from 2022, according to which the Chinese steelmaking capacity slightly decreased in 2020 and 2021[1847].

In these circumstances it is difficult to obtain a precise picture of the Chinese steelmaking capacity and overcapacity. In any event, the reported steelmaking capacity's increase combined with the slowly recovering end-user demand for steel in China has continued to squeeze steel profit margins but with mills still showing no signs of cutting back on production.

According to the OECD, Chinese steel companies are also investing substantially in capacity projects overseas, which indicates that China is exporting its overcapacity. Chinese companies are involved in 13 cross-border investments and participate in nine JV investments abroad. The Association of Southeast Asian Nations ('*ASEAN*'), which is the top region among the cross-border investments, is expected to increase capacity to levels that far exceed the region's steel demand[1848]. This trend is confirmed by the 2023 OECD paper[1849] which indicates that the steelmaking excess capacity is on the rise and is expected to be as high as in 2014 when the last steel crisis started. The excess capacity problem has never been solved, but the crisis is currently escalating, with the steelmaking capacity forecast to increase to 2 500 mmt by the end of 2023. The OECD document is clear: China is contributing to the expansion. At the same time, there is clear risk of a serious downturn in Chinese steel demand because of the real estate decline. In these circumstances, Chinese steel companies continue to invest massively overseas. This negative perspective for steel demand and the increasing relocation of Chinese steel capacity to other regions create a worrying outlook for the coming years.

Moreover, the figures included in this Chapter concerning Chinese capacity and overcapacity may be significantly underrepresented. There were strong indications of a large amount of production capacity which China had been consistently underreported[1850]. When participating in the GFSEC during 2016-2019, China was advertising its efforts to reduce overcapacity by

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1845 Global Forum on Steel Excess Capacity, 2021 GFSEC Ministerial Report, available at: https://steelforum.org/events/gfsec-ministerial-report-2021.pdf (accessed on 3 October 2023). According to the report, China's steelmaking capacity increased by a cumulative 32.9 mmt during the two-year period of 2019 and 2020, accounting for 45% of the world's capacity increase of 73.7 mmt observed over these two years.

1846 SBB Daily Briefing (10 April 2023).

1847 According to the OECD, the Chinese capacity decreased for four consecutive years until 2018 and again in 2020 and 2021 but has since recovered slightly to 1 149.9 mmt in 2022. See: OECD, Latest developments in steelmaking capacity, document n° DSTI/SC(2022)12/FINAL.

1848 *Latest developments in steelmaking capacity*, OECD DSTI/SC(2023)3, 17 February 2023; See also https://stats.oecd.org for OECD historical capacity data and https://www.oecd.org/industry/steelcapacity.htm for the latest published analysis on world steelmaking capacity developments (accessed on 3 October 2023).

1849 *Latest developments in steelmaking capacity*, OECD DSTI/SC(2023)10, 17 October 2023.

1850 Data for 2016 gathered by the OECD (crude steelmaking capacity of China equal to 1 153 355 thousand tonnes) compared to the official figures provided by China during the 2017 GFSEC (capacity of 1 073 330 thousand tonnes) differs by 80 million tonnes. See OECD Half-yearly steel statistical report, OECD DSTI/SC(2017)14, page 3 and G20 Global Forum on Steel Excess Capacity, final report 30/11/2017, page 21. OECD report *Capacity developments in the world steel economy* reports 1 164.55 million tonnes of production capacity in China in 2016, which results in a discrepancy of above 90 million tonnes. See OECD (2017), Capacity developments in the world steel economy DSTI/SC(2017)2/FINAL.

closing old and outdated facilities. However, as mentioned above, China stopped its participation to the GFSEC in 2019 and it became even more difficult to collect accurate information about its production capacity and overcapacity.

Chinese documents on the issue of overcapacity are contradictory. The 14th Raw Materials FYP praises the "*outstanding outcomes in industry transformation and upgrading*" that have been allegedly achieved since the 13th FYP period in the raw materials industries[1851]. When it comes to headway made in restructuring in the steel sector, the Plan proclaims that the objective[1852] of reduction of steel production capacity by 150 million tonnes has been achieved ahead of schedule. The Plan even goes as far as to say that "*the balance has been basically restored between the total supply and demand*" in industries with severe overcapacity[1853]. While steel is no doubt an industry with severe overcapacity, its capacity reduction is not that clear, as the Steel Industry Development GO states that "[w]*ith a more reasonable layout structure, the iron and steel market's supply and demand fundamentals shall achieve a dynamic balance*[1854]" and recognises that the "*steel industry is still under a strong overcapacity pressure*"[1855]. Several policies set out in the 14th Raw Materials FYP also show an intent on keeping overcapacity in check. An example for such policies is the development of an appropriate industrial structure under which the Plan foresees a consolidation of the achievements of overcapacity cuts. More precisely, the Plan states that "[n]ew *production capacity increases will be strictly controlled*", and that "*long-term working mechanisms preventing overcapacity shall be improved* [...]"[1856] etc.

However, since China discontinued its participation in the GFSEC, no precise figures exist as to whether or to what degree the objectives to reduce capacity have been achieved. According to the Plan, the creation of new capacity is not forbidden, as the Plan mentions that "[n]*ew production capacity increases will be strictly controlled.*" In that context the Plan foresees a prohibition of new projects that "*are included in the restricted and eliminated categories under the Guiding Catalogue for Industry Structural Adjustment*". By contrast, the wording of the Steel Industry Development GO is much more concrete and prescriptive as it sets the clear objective "[to]*strictly prohibit new increases of steel production capacity. Resolutely curb the blind construction of the iron and steel smelting projects, strictly implement laws, regulations and policies on capacity replacement, project filing, environmental impact assessment, pollution discharge permits and energy assessment, and prohibit new increases of steel production capacity in the name of mechanical processing, casting, ferroalloys, etc.*"[1857].

Causes

The existence of certain levels of overcapacity in the steel sector is not uncommon and is inherent, *inter alia*, to business cycles of the market[1858]. However, sustained high levels of

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1851 The Plan, Section I.(I).
1852 The objective for reduction of 100-150 mmt was embodied in the 13th FYP.
1853 The Plan, Section I.(I).
1854 Steel Industry Development GO, Section I (III).
1855 Steel Industry Development GO, Introduction.
1856 The Plan, Section IV (I).
1857 Steel Industry Development GO, Section II (V).
1858 OECD. (2015). *Excess capacity in the global steel industry: The current situation and ways forward.*

overcapacity throughout the years, which in a competitive situation would have otherwise resulted in market adjustments, are a strong indication of government intervention in that market[1859]. As shown above in Section 14.1.2, this is precisely the situation existing in China, as also recognised by the State Council itself.

The combination of numerous industrial policies applied over a long period, the significant presence of SOE steel producers in the market, the role of state-owned financial institutions with the resulting effect of creating *'zombie companies'*, as well as the provision of a wide range of State support measures and other market distortive practices have fuelled massive irrational investment and lending in the steel sector, resulting in the current high levels of overcapacity. In other words, state ownership and various forms of state support have likely contributed to the crisis which has global trade and investment repercussions.

Effects

Amongst other effects, overcapacity causes a surge of exports and depression of steel prices world-wide, and hence destabilises global steel market[1860]. In addition, overcapacity has also been found to negatively affect profitability[1861]. These negative effects are further amplified due to a situation of weakness in the sector and prospects of slow growth[1862].

As a consequence, TDI investigations have continued to surge against Chinese steel imports in recent years[1863]. For instance, in 2022 and until December 2023, the Commission launched twelve trade defence investigations against unfair trading practices relating to steel imports from China[1864]. Other countries have launched numerous trade defence investigations against steel imports from China as well.

Reduction of overcapacity in China's steel sector: previous attempts

The Chinese authorities acknowledged previously that the steel sector was facing a serious problem of overcapacity and was trying to resolve it[1865]. Already in the early 2000s, the Chinese authorities began to regard overcapacity as a growing problem. Although the context presented a positive situation of global growth, particularly boosted by a large internal demand for steel,

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1859 *Ibid.*, p. 3.

1860 *Steel: Preserving sustainable jobs and growth in Europe*; Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank; COM(2016) 155 final, 16.3.2016; OECD, (2015), *Evaluating the Financial Health of the Steel Industry*.

1861 OECD, (2015), *Evaluating the Financial Health of the Steel Industry*; Kowalski, P. and Rabaioli D. (2017). *Bringing together international trade and investment perspectives on state enterprises*, OECD Trade Policy Papers, No. 201, OECD; SBB Briefing (10 April 2023).

1862 SBB Briefing (10 April 2023).

1863 Measures on Iron & Steel sector in the EU amounted to 49% and 40% of the total AD and CVD cases initiated in the period 2018-first half of 2022 (most of which, on Chinese imports). Iron & steel cases represented 47% of the total investigations initiated by the Commission during this period. Amongst WTO members (excluding the EU) the measures on Iron & Steel amounted to 27% and 32% of the AD and CVD cases initiated in that period. In total, the investigations initiated by the other WTO members in the period 2018-first half of 2022, in the Iron & Steel sector amounted to 28% of all the investigations initiated.

1864 See at: https://tron.trade.ec.europa.eu/investigations/ongoing (accessed on 5 December 2023).

1865 It is acknowledged, *inter alia*, in the Plan for Adjusting and Upgrading the Steel Industry. However, a decade earlier, in 2006, the State Council had issued the Circular on Accelerating the Structure Adjustment of the Industries with Production Capacity Redundancy, where the overcapacity problem was already acknowledged for, inter alia, the iron and steel sector.

the Chinese authorities were concerned about a likely worsening of the situation in the future. There have therefore been several attempts to curb overcapacity over the years.

As noted above, already in 2003, the State Council issued a Notice highlighting the incipient problem of overcapacity in some sectors, including steel[1866]. In 2006, the State Council issued the Circular on Accelerating the Structure Adjustment of the Industries with Production Capacity Redundancy[1867] warning about serious risks of further aggravation of the problem. The NDRC also issued the Notice on Preventing the Blind Re-expansion of High-Energy Consuming Industries[1868]. In 2009, through the Blueprint for Steel Industry Adjustment and Revitalisation and the Urgent Notice of the MIIT requiring Local Governments to Curb Excessive Growth in Crude Steel Output[1869], the existence of even higher levels of overcapacity continued to be acknowledged.

Further attempts were made to resolve the overcapacity problem in 2013 through the Guiding Opinion of the State Council Regarding Resolving the Contradiction of Serious Overcapacity[1870], in 2015 through the Circular on Measures for the Implementation of Capacity Replacement in Industries with Serious Overcapacity[1871] and in 2016 through the State Council's Opinions on Reducing Overcapacity in the Steel Industry to Achieve Development by Solving Difficulties[1872].

However, the effectiveness of such policies appears inadequate.

The limited attempts that were made to reduce overcapacity in accordance with the 2013 plan were largely ineffective. For example, in late 2013, China's Hebei province staged an event during which demolition squads blew up blast furnaces owned by 15 mills, all shown on Chinese state television. According to the Wall Street Journal, however, "[a]*ll of the furnaces targeted for destruction turned out to be so outmoded that the companies that owned them didn't consider them spare capacity, steel-industry officials* [said], *meaning they didn't help reduce the province's extra volume"*. In part due to the lack of progress closing capacity in Hebei, "*there is no reason to assume that* [the government's 80-million tonne closure] *target will be met",* let alone the larger level of capacity closure envisioned by China's newly announced plan[1873].

1866 Notice of the General Office of the State Council Issuing the Several Opinions of the National Development and Reform Commission and Other Agencies Regarding Checking Blind Investment in the Steel, Aluminium, and Cement Sectors, Guo Ban Fa [2003] No. 103 (Dec. 23, 2003).

1867 Circular on Accelerating the Structure Adjustment of the Industries with Production Capacity Redundancy, No. 11 (2006) of the State Council.

1868 NDRC Notice on Preventing the Blind Re-expansion of High-Energy Consuming Industries, No. 1332 (2006), NDRC.

1869 Urgent Notice of the MIIT requiring Local Governments to Curb Excessive Growth in Crude Steel Output, No. 191 (2009) of the MIIT.

1870 Guiding Opinion of the State Council Regarding Resolving the Contradiction of Serious Overcapacity (6 October 2013).

1871 Circular on Measures for the Implementation of Capacity Replacement in Industries with Serious Overcapacity, No. 127 (2015), MIIT.

1872 See at: https://www.gov.cn/zhengce/content/2016-02/04/content_5039353.htm (accessed on 3 October 2023)

1873 Price, A. Weld, C. El-Sabaawi, L. and Teslik, A. (2016). *Unsustainable: Government intervention and overcapacity in the global steel industry*, Wiley Rein LPP, pp. 7-8.

An official commitment to reduce steel overcapacity was also set out in the 13th FYP for Steel, i.e. the government sought to reduce China's steel overcapacity by 100-150 mmt by 2020. Once again, since China left the GFSEC in 2019, it has become difficult to get reliable data to assess whether or to what degree China has achieved this goal.

The most recent official documents, adopted at central level, dealing with the steel overcapacity issue are the 14th Raw Materials FYP and the Steel Industry Development GO. The Plan announced that the objective of reducing 150 mmt of steel production capacity has been achieved ahead of schedule and that for sectors struggling with serious overcapacity, balance had been restored between the total supply and demand. As to the future, the Plan set the following goals:

- *New production capacity increases will be strictly controlled. The production capacity replacement policies for steel will be improved and strictly implemented.*
- *Robust long-standing mechanisms will be established. Constraint mechanisms that employ such indexes as carbon emissions, pollutant emissions and total energy consumption to contain the expansion of excess production capacity will be put in place.*
- *Less competitive urban steel mills that are unable to meet the requirement of ultra-low emissions and those based in key areas for air pollution prevention and control will be shut down, reformed locally, or relocated and reformed, or seek transformation, so as to enable the transformation and upgrading of the industry.*
- [...] *mechanisms to shift production peaks shall be explored in the steel sector.*
- *Energy conservation reviews need to be implemented to strictly control the thermal coal consumption of major coal consumers, including sectors like steel. Long-term working mechanisms preventing overcapacity shall be improved and unimpeded reporting channels shall be made available.*
- *Joint law enforcement shall be strengthened, and sectoral early warnings shall be reinforced; fully use satellite monitoring, big data and other technological tools to intensify efforts to investigate and punish illegal acts of production capacity increase and keep up a high-pressure repression state.*

Notably, all these objectives lack specific, measurable targets. The capacity reduction is in a way mixed up with the objectives for emissions reduction. By monitoring the steel industry's emissions - which are expected to be lowered - the government wants to ensure that actual production capabilities fall, thereby reducing the steel overcapacity. Yet, the steel capacity reduction has no clear measurable targets, the outcome is meant to be derivative of emissions reduction. The Steel Industry Development GO simply notes that overcapacity remains a major issue alongside low industry concentration and other issues, and strict control over increased steel production capacity features nominally among the major tasks.

However, the fact that the 14th Raw Materials FYP and the Steel Industry Development GO do not contain any precise target for capacity reduction for the period 2021-25 is a sign that the level of ambition to tackle the overcapacity problem has decreased. This is also the case of the regional steel Plans. According to some mill sources, in April 2023, NDRC was still soliciting

opinions from major Chinese steel mills on details of the 2023 crude steel output cuts[1874]. According to market intelligence, steel mills typically only receive verbal orders to cut output[1875].

Several conclusions can be drawn from the past attempts by Chinese authorities to curb overcapacity in the steel sector:

- *Root of the problem*: In the first place, the Government recognised, since more than a decade, that overcapacity has been a problematic issue that could grow out of control. This has in fact happened.
- *Ineffective attempts to solve the problem:* In this regard, it is important to highlight that, with the successive plans/directives, the Chinese authorities have de facto directly contributed to exacerbating a problem that was created by their own policies. The plans and directives have focused on the reduction of outdated/backward capacity and the closure of mills/furnaces of a certain (small) size. At the same time, an upgrade of the production system - moving towards the production of higher added value steel products - and a higher level of concentration in the sector have been encouraged, seeking to have a few '*national champions'* in the sector[1876]. This rendered the overcapacity reduction policies ineffective and resulted in an increase of total capacity, despite eliminating certain backward capacity.

Another obstacle identified for an effective implementation of the Government's policies has been the absence of market-based policies which in turn allow local governments to resist plant closures in order to avoid the consequences of loss of employment etc[1877].

Therefore, not only has China been unable to meet the capacity reduction requirements in the past, but it has also continued to build-up massive overcapacity throughout the years[1878], driven by the very measures directed at reducing it.

1874 Soliciting opinions on steel output was done with a view to cutting output.

1875 SBB Briefing (10 April 2023).

1876 See Commission Implementing Regulation (EU) 2017/969, recital 247: '[…] *it confirmed that there is a governmental policy in the PRC to develop large national champions (mostly state-owned) in the steel industry over smaller (mostly private) mills*'. Also, in line with these objectives, the merger between Baosteel and Wuhan (both SOEs), gave rise to the world's first largest steel producer (2021): Baowu. See Reuters. (2016) *China completes merger that creates nation's biggest steel company* http://www.reuters.com/article/us-china-steel-m-a-idUSKBN13Q3B0 (accessed on 3 October 2023). This policy continues in 2023, see: China to bring up more than 200 mmt/year of new capacity through swaps (SBB Daily Briefing, 10 April 2023).

1877 OECD. (2015). *Excess capacity in the global steel industry: the current situation and ways forward*; The Economist Intelligence Unit. (2016). *The implications of steel capacity cuts*: http://country.eiu.com/article.aspx?articleid=804209864&Country=China&topic=E; European Chamber of Commerce in China. (2016). *Overcapacity in China: An Impediment to the Party's Reform Agenda*, p.16; Australian Anti-dumping Commission. *Analysis of steel and aluminium markets report to the Commissioner of the Anti-dumping Commission*, p. 48, 2016; Alloway, T. (2015). *Why China's Steel Mills Won't Cut Back Production*, Bloomberg https://www.bloomberg.com/news/articles/2015-11-24/why-china-s-steel-mills-won-t-cut-back-on-production ; Stanway, D. and Lian, R. (2012) *Analysis: China steel mills too big to fail – or succeed*, Reuters, 3 May 2012. https://www.reuters.com/article/us-china-steel/analysis-china-steel-mills-too-big-to-fail-or-succeed-idUSBRE84203620120503 (accessed on 3 October 2023).

1878 OECD. (2017). *Capacity developments in the world steel industry*; Table 1: Crude steelmaking capacity developments.

14.7. CISA

CISA is the national Chinese association representing the Iron and Steel industry. According to its AoA[1879], the objectives of CISA are:

- Guided by the Party's line, principles and policies, adhere to the working principles by relying on members running the association, represent the interests of members and safeguard the legal rights and interests of members.
- Strive to serve members and the industry, keep providing services, expressing requests, carrying out activities complying with laws and regulations; strive to play the role of bridge and link between the government and members.
- Further build the association, build a high-quality and capable professional and expert team, and strive to build the association into an industry organization with domestic reputation and international influence.
- With the goal of being committed to the healthy development and sustainable prosperity of China's iron and steel industry, the Association actively promotes the high-quality development of China's iron and steel industry in order to strive and build a strong steel producing country.

Since the publication of the 2017 version of this Report, the CISA's AoA were modified in order to strengthen the links of the association with the CCP (see also Section 2.3.3).

According to Article 2 of the AoA, the Association "*abides by the Constitution, laws, regulations and national policies, implements the core values of socialism, promotes the spirit of patriotism, abides by social morality, and consciously strengthens the construction of integrity and self-discipline.*"

According to Article 3 of the AoA, CISA "*adheres to the overall leadership of the Communist Party of China. In accordance with the provisions of the Constitution of the Communist Party of China, it establishes an organization of the Communist Party of China, carries out Party activities and provides necessary conditions for the activities of the Party organization.*"

The entity in charge of the registration and management of CISA is the Ministry of Civil Affairs and the entity in charge of its Party building is central SASAC's Party Committee. According to its AoA, CISA accepts the guidance, supervision and management by the entities in charge of registration and management, by entities in charge of Party building, as well as by the relevant administrative departments in charge of industry management.

The position of the President of the Association is subject to a rotation system. The term of office is one year, which can be extended due to special circumstances. One of the conditions to be eligible for holding office within CISA's managerial structures is also the requirement to "[a]*dhere to the leadership of the Communist Party of China, support socialism with Chinese characteristics, resolutely implement the Party's line, principles and policies, and have outstanding political qualities*"[1880], which again demonstrates the narrow links between CISA and the CCP.

1879 See CISA Articles of Association, Article 2.

1880 See Article 36 of the AoA.

14.8. CHAPTER SUMMARY

The steel industry is regarded as a key/pillar industry by the government. This is confirmed in numerous plans, directives and other documents focused on steel, which are issued at national, regional and municipal level. The government guides the development of the sector in accordance with a broad range of policy tools and directives related, *inter alia*, to market composition and restructuring, raw materials, investment, capacity elimination, product range, relocation, upgrading etc. Through these and other means, the government directs and controls virtually every aspect in the development and functioning of the sector (see Section 14.1).

For the last several decades Chinese policies have been to support the rise of '*national champions*' in the steel industry. To accomplish this, the Chinese authorities have employed an elaborate set of financial and other subsidies for the sector and engineered strategic mergers that consolidated the industry players. In this respect, SOEs are a key instrument through which the government continues to develop the steel sector, not least by promoting the creation of ever-larger steel producers. This is achieved through policies intended to shape the structure of the market, e.g. through mergers and regulation of market access. In addition, Chinese financial institutions play a key role in implementing the government's policies in the steel sector. They provide access to finance following the government's direction and implementing the government's policy objectives (see Section 14.3).

These elements combined present a picture of a sector heavily influenced by the government. In this regard, numerous trade defence investigations in various jurisdictions have confirmed that Chinese steel producers benefit from a wide array of State support measures and other market distortive practices such as export restrictions affecting raw materials and inputs (see Sections 14.4 and 14.5).

The overarching control of the government prevents free market forces from prevailing in the steel sector in China. The problem of overcapacity is arguably the clearest illustration of the implications of the government's policies and the distortions resulting therefrom. Overcapacity built up by China over years triggered a surge of low-priced Chinese exports causing a depression of steel prices globally and having a negative impact on, *inter alia*, the financial situation of steel producers worldwide. While the government has committed to addressing the overcapacity problem, in particular through the 14th Raw Materials FYP and the Steel Industry Development GO, it remains to be seen whether this and other targets for the sector are successfully met, given in particular that *(i)* during the 14th planning cycle, the declared objectives for the steel sector appear contradictory as far as overcapacity reduction is concerned[1881] and *(ii)* following China's departure from GFSEC, it became very difficult to get any accurate information related to the reduction of overcapacity in China (see Section 14.6).

[1881] According to the Plan, the "*increases will be strictly controlled*" while the Steel Industry Development and GO "*strictly prohibits new increases of steel production capacity*".

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15.1. INTRODUCTION

Following a brief overview of the Chinese aluminium industry, this chapter will first examine the policy documents steering the sector. Second, the chapter will give some concrete examples of distortions present in the aluminium sector, both with respect to corporate and institutional players, as well as concerning factors otherwise influencing the functioning of the aluminium market, for example in relation to costs of production. In addition, the chapter lists some examples of past distortions found in various trade defence investigations.

15.2. THE CHINESE ALUMINIUM MARKET

15.2.1. PRODUCTION

The production process of aluminium requires few main raw materials. The basic ingredient necessary for the production of aluminium is bauxite, mined in various locations around the world using open-cast mining technique. China is a major bauxite importer, as its domestic resources are not sufficient to meet its demand. Bauxite is then refined into alumina, a white powder, which is smelted into pure aluminium metal using a very energy-intensive process of electrolysis. As already explained in Chapter 10, electricity can represent up to 40% of the total production cost of aluminium. The finished products will then be manufactured using cast or wrought aluminium, depending on final use. In most cases pure aluminium is not suitable for industrial applications, but certain alloying elements need to be added, in order to improve the properties of the metal, such as corrosion resistance, machinability, ductility, weldability and strength at high temperatures. Alloying elements include manganese (strength and formability),

magnesium and silicon (strength and corrosion resistance), copper and zinc (higher strength), and titanium and chromium (grain size control)[1882].

China is the world's main producer of primary aluminium, accounting for around 60% of the approximately 68.5 million tonnes of global output[1883] in 2022[1884]. The two datasets in Figures 15.1 and 15.2 below provide full details of the primary aluminium and alumina production in various regions around the world, including China.

Figure 15.1: Primary aluminium production[1885]

Period	Africa	North America	South America	Asia (ex China)	Western & Central Europe	Russia & Eastern Europe	Oceania	Gulf Cooperation Council	China (Estimated)	Estimated Unreported to IAI	Total
2022	1,620*	3,743	1,288*	4,591	2,913	4,081	1,843	6,074*	40,430*	1 878	68,461*
2021	1 590	3,880	1,163	4,499	3,329	4,139	1,888	5,889	38,837	1,878	67,092
2020	1 605	3,976	1,006	4,140	3,334	4,153	1,912	5,833	37,337	2,029	65,325
2019	1,643	3 809	1,079	4,395	3,449	4,157	1,916	5,654	35,795	1,760	63,657
2018	1,668	3,774	1,164	4,415	3,733	4,049	1,917	5,331	36 485	1 630	64,166
2017	1 679	3,950	1,378	3,951	3,776	3,999	1,817	5,149	35 905	1 800	63,404

1882 European Aluminium "The Aluminium Automotive Manual", available at: https://european-aluminium.eu/wp-content/uploads/2022/11/aam-materials-1-resources.pdf (accessed on 14 August 2023).

1883 OECD (2019), Measuring distortions in international markets: the aluminium value chain, OECD Trade Policy Papers, No. 218, OECD Publishing, Paris, p.41.; available at: https://doi.org/10.1787/c82911ab-en (accessed on 5 July 2023).

1884 See World Aluminium Statistics, available at: https://international-aluminium.org/statistics/primary-aluminium-production/ (accessed on 5 July 2023).

1885 Available at: https://international-aluminium.org/statistics/primary-aluminium-production/ (accessed on 8 August 2023).

Figure 15.2: Alumina production[1886]

Period	Alumina Grade	Africa & Asia (ex China)	North America	South America	Western & Central Europe	Russia & Eastern Europe	Europe (inc Russia)	Oceania	China (Estimated)	Estimated Unreported to IAI	Total
2022	Total	13,792	2,414	11,634			8,219	20,116	79,760*	4,148	140,083*
2021	Total	13,210	2,523	12,111			10,400	20,936	75,259	4,148	138,587
2020	Total	12,395	2,671	11,780	5,618	4,597		21,171	71,010	3,836	133,078
2019	Total	10,329	2,932	10,739	5,738	4,447		20,491	71,284	5,950	131,910
2018	Total	8,936	2,869	9,991	5,855	4,479		20,365	71,547	6,500	130,542
2017	Total	8,382	3,033	12,713	5,890	4,499		20,783	70,699	6,391	132,390

Despite its production levels, in 2019, China exported only about 578 000 tonnes of primary aluminium, which represented less than 2% of its production volume in that same year[1887]. This is because China's policies, including export taxes on primary aluminium and incomplete VAT rebates on exports of certain aluminium products, discourage exports of primary aluminium and encourage production (and export) of semi-finished products ('*semis*')[1888] and fabricated articles of aluminium[1889] (see Section 15.5.2). The access to cheap inputs has enabled Chinese producers of semis to expand production and compete in global markets at lower cost. Primary aluminium accounts for about 75-86% of total production costs for semis, which makes competitiveness in the semis segment largely dependent on the cost of procuring such primary aluminium[1890]. Therefore, any distortions in relation to primary aluminium in China would likely be carried over down the supply chain and are reflected as trade distortions also in the market for semis.

Finished aluminium products include cast aluminium and wrought aluminium, depending on the last step in the production: either casting or rolling, forging or extruding into its final shape. The main wrought aluminium categories are flat-rolled products, extrusions and wire and cables, with China leading in all three categories.

1886 Available at: https://international-aluminium.org/statistics/alumina-production/ (accessed on 8 August 2023).

1887 OECD (2021), "Measuring distortions in international markets: Below-market finance", *OECD Trade Policy Papers*, No. 247, OECD Publishing, Paris, p. 51; available at: https://doi.org/10.1787/a1a5aa8a-en. (accessed on 8 August 2023). In value terms, according to the China Statistical Yearbook (see the 2021 edition, Section 11-4, available at: http://www.stats.gov.cn/sj/ndsj/2021/indexeh.htm (accessed on 31 August 2022), in 2020, China exported roughly RMB 170 billion worth of aluminium and aluminium products.

1888 Aluminium semi-finished products (also called semis) include sheet, strip, plate, profiles, rod and bar, tube, wire, forgings etc.

1889 Measuring distortions in international markets: the aluminium value chain, p.6.

1890 *Ibid.* p. 15.

Since the publication of the 2017 version of this Report, the Commission conducted investigations and established distortions (and dumping) in the following aluminium products: aluminium converter foil, aluminium extrusions, aluminium flat-rolled products, aluminium foil (certain), aluminium foil in rolls and aluminium road wheels (see also Section 15.6).

15.2.2. GEOGRAPHICAL DISTRIBUTION OF THE ALUMINIUM INDUSTRY

As a result of the drive to consolidate the industry and create large producers, the so-called '*national champions*', China's aluminium SOEs are now among the largest producers in the world (see Section 15.4.1). The aluminium industry is concentrated in a number of provinces, which for geographical reasons have better conditions to support the industry. Provinces with rich resources, mainly bauxite, are attractive14.6 locations for aluminium producers, along with provinces allowing access to cheap electricity. In China, the largest bauxite deposits are located in Shanxi, Henan, Guangxi Zhuang autonomous region and Guizhou[1891]. The main Chinese alumina producing provinces are Henan, Shandong, Guangxi, Xinjiang, Inner Mongolia, Shanxi and Guizhou. Main electrolytic aluminium producers are Shandong, Xinjiang and Inner Mongolia, but there are production plants also in other provinces, such as Yunnan and Guangxi, which recently became an attractive location due to cheap renewable electricity[1892].

Hongqiao (the world's largest aluminium producer) and Xinfa Group were ordered to close a combined 3.21 million tonnes of illegal capacity in 2017 in Shandong, giving Henan the lead in the Chinese aluminium production at that time[1893]. According to certain data, Shandong was again in the lead in 2022 producing again more aluminium than Henan[1894]. Due to an increased focus on environmental issues, some capacity is being moved from heavily coal-dependent provinces to provinces with clean energy sources. For example, in 2021, Hongqiao announced a move of 1.93 million tonnes of aluminium capacity to Yunnan, where hydropower constitutes 75% of electricity sources, as from 2023[1895]. The ultimate goal is to relocate about 60% of

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1891 China Daily: Guizhou province becoming major hub for aluminium producer, available at: https://www.chinadaily.com.cn/a/201909/03/WS5d6db643a310cf3e35569508.html (accessed on 8 August 2023).

1892 "*According to statistics, as of December 2022, the built-up production capacity of electrolytic aluminium in Shandong, Xinjiang, Inner Mongolia, and Yunnan provinces were 7.92, 6.38, 6.37, and 5.38 million tons, respectively, accounting for the national total. 17.6%, 14.2%, 14.2% and 12.0% of the built-up production capacity, the four provinces together accounted for 57.9%,* [of China's aluminium production]. *From the perspective of power generation sources, the production of electrolytic aluminium in Shandong, Xinjiang and Inner Mongolia mainly relies on thermal power, while Yunnan and Guangxi mainly rely on hydropower, and the total production capacity of the two places accounts for 18.8%.*" See Sealand Securities, Special Research on Electrolytic Aluminum Industry, page 13, available at: https://pdf.dfcfw.com/pdf/H3_AP202303141584260663_1.pdf?1678831864000.pdf (accessed on 8 August 2023).

1893 Reuters. China's Henan leapfrogs Shandong to become top aluminium producing region, available at: https://www.reuters.com/article/china-economy-output-aluminium-idAFL2N1PH099 (accessed on 8 August 2023).

1894 See detailed production distribution among provinces, available at: https://m.chinabgao.com/top/output/67169.html (accessed on 8 August 2023).

1895 Reuters, China Hongqiao to move aluminium smelting capacity to Yunnan province, available at: https://www.reuters.com/markets/commodities/china-hongqiao-move-aluminium-smelting-capacity-yunnan-province-2021-12-28/ (accessed on 8 August 2023).

Hongqiao's 6.46 million metric tons of production capacity from Shandong to Yunnan province[1896].

The table below identifies the main provinces producing aluminium and the main producers, with information about ownership status, where available:

Province	Main producers
Henan Province[1897]	Shenhuo Henan branch (SOE) Zhongfu Industry Group Chalco Henan branch (SOE) *Jiaozuo Wanfang Aluminium* Manufacturing Company Linfeng Aluminium Henan *Yugang Longquan Aluminium* Industry *Henan Wanji Aluminium (SOE)*
Shandong Province[1898]	Hongqiao/Weiqiao Xinfa Group Shandong branch Shandong Nanshan Aluminium (SOE)
Xinjiang Uyghur Autonomous Region[1899]	Shandong Xinfa Aluminium Xinjiang East Hope Nonferrous Metals Xinjiang Tianshan Aluminium Xinjiang Qiya Aluminium & Power Xinjiang Shenhuo Coal and Electricity (SOE) Xinjiang Jiarun Resources Holdings Xinjiang Joinworld Xinjiang Tianlong Mining (SOE)
Inner Mongolia Autonomous Region	Inner Mongolia Chuangyuan Metal Baotou Aluminium Factory (SOE) Baotou Oriental Hope Aluminium Co
Qinghai Province	Qinghai Provincial Investment Group (SOE) Qinhai Qiatou Aluminium and Power Co. Ltd. (SOE) Chalco Qinghai branch (SOE)

1896 Aluminium Insider. Hongqiao To Move Additional 1.93 MM MTPA Of Aluminium Smelting Capacity To Yunnan Province, available at: https://aluminiuminsider.com/hongqiao-to-move-additional-1-93-mm-mtpa-of-aluminium-smelting-capacity-to-yunnan-province/ (accessed on 8 August 2023).

1897 Capacity of the province in 2022: 10.94 million tonnes;see at: https://m.chinabgao.com/top/output/67169.html (accessed on 8 August 2023);Henan Shenhuo moved some capacity to Yunnan; see at: Reuters. China's Henan Shenhuo to start up Yunnan aluminium smelter on Dec. 31: https://www.reuters.com/article/china-aluminium-shenhuo-idUSL4N2900FH (accessed on 8 August 2023).

1898 Capacity of the province in 2022: 13.43 million tonnes, out of which large part to be moved to Yunnan; *Ibid.*

1899 Capacity of the province estimated at around 1.77 million tonnes in 2022; *Ibid.*

Gansu Province	Gansu Dongxing Aluminium Jiayuguan Branch (SOE) Chalco Lanzhou branch (SOE) Chalco Liancheng branch (SOE)
Guangxi Province	Chalco Guangxi branch (SOE) Guangxi Baise Yinhai Aluminium (SOE) Xinfa Aluminium Guangxi branch Guangxi Laibin Yinhai Aluminium (SOE)
Yunnan Province	Yunnan Aluminium (SOE) Hongqiao (announced transfer of capacity from Shandong, as from 2023) Yunnan Dongyuan Coal Industry Group Qujing Aluminium Industry (SOE)
Guizhou Province	Chalco Guizhou branch (SOE)
Ningxia Hui Autonomous Region	SPIC Ningxia Energy and Aluminium (SOE)
Sichuan	Sichuan Aostar Guangyuan Aluminium Smelter Chongqing Qi'neng Power and Aluminium (SOE) Sichuan Emei Aluminium Plant
Shanxi	SPIC Shanxi Aluminium (SOE) Chalco Shanxi branch (SOE)
Liaoning	China Zhongwang Holdings
Zhejiang	Hangzhou Jinjiang Group

15.2.3. OVERCAPACITY

15.2.3.1. OVERVIEW

Since the early 2000s, and particularly in the last decade, the Chinese aluminium industry has experienced massive growth, both in alumina and primary aluminium production and accounted for the vast majority of the production capacity increase in the aluminium sector worldwide[1900]. Several factors have played a role in this massive capacity expansion in China. The upward trend can be partially explained by an increase in the domestic and global demand, which attracted investment in the sector. At the same time, as explained in Section 15.1.5.3., there are examples of State-owned aluminium producers benefitting from lower energy costs due to government intervention, in addition to the generally favourable access to finance for Chinese

[1900] European Union Chamber of Commerce in China. (2016): *Overcapacity in China: An Impediment to the Party's Reform Agenda*, p.19.

SOEs (see Chapter 6.). Aluminium production is energy-intensive[1901] and unlike other major aluminium producing countries, China does not enjoy a particular comparative advantage resulting in lower energy costs. Therefore, any government action influencing such an important cost element provides an artificial advantage to Chinese aluminium producers. As a consequence, this and other types of government support have contributed to an increase in production capacity, which would not have otherwise occurred in the absence of such support. This has led to the existing problem of overcapacity in the sector.

15.2.3.2. Current Situation and Previous Attempts to Curb Overcapacity

As is true for certain other sectors of the Chinese economy, most notably steel (see Section 14.6), the Chinese aluminium sector has faced a serious problem of overcapacity. According to official Chinese data, electrolytic aluminium production capacity increased from 5.54 million tonnes in 2003 to 26 million tonnes in 2012, with an average annual growth rate of 18.7%[1902]. From 2008 to 2011, the capacity utilization rate did not exceed 75%. In 2012, when the aluminium production capacity reached 26 million tonnes, the actual output was 19.88 million tons, and the capacity utilization rate was about 76%[1903]. It is estimated that in 2015 there were 9.2 million tonnes of overcapacity in the Chinese aluminium sector, increasing from 4.9 million tonnes in 2008[1904]. The growth in capacity was uncontrolled and for example in 2013, even 85% of newly added capacity lacked approval[1905]. In recent years, the growth slowed down. For example, between 2019 to 2020, the increase in production amounted to some 3.3%[1906]. For 2022, the Chinese aluminium sector's production capacity was estimated at 44.3 million tonnes and functioning at a 92% capacity utilisation rate[1907].

The problem of overcapacity has been widely acknowledged by the Government which, since the early 2000s, has launched several attempts aimed at reducing overcapacity and curbing production in the sector. Though the Government has tried to limit project approvals and even halt them, new capacity has still emerged, often without authorisation but with implicit support from local governments. A 2015 analysis by the State Information Centre under the NDRC identified the following problems:

- *in 2012, 93% of electrolytic aluminium enterprises in the country* [were] *in a state of loss, relying on local government subsidies;* [...]

1901 Communication from the Commission to the European Parliament, the European Council and the Council: *Towards a robust trade policy for the EU in the interest of jobs and growth* (2016), p.2; European Union Chamber of Commerce in China. (2016): *Overcapacity in China: An Impediment to the Party's Reform Agenda*, p. 19.

1902 State Information Centre: Analysis of China's aluminium industry overcapacity issues and solutions, available at: http://www.sic.gov.cn/News/455/4113.htm (accessed on 8 August 2023).

1903 *Ibid.*

1904 European Union Chamber of Commerce in China. (2016): *Overcapacity in China: An Impediment to the Party's Reform Agenda.*

1905 Economic Information Daily: '*Crazy*' expansion of aluminium capacity to the western regions; available at: http://www.jjckb.cn/2013-04/01/content_436837.htm (accessed on 8 August 2023).

1906 Reuters, Home, A.,Column: China's aluminium juggernaut may be running out of road,; available at: https://www.reuters.com/article/us-metals-aluminium-ahome-column-idUSKBN27F1TY (accessed on 8 August 2023).

1907 Stainless Espresso: Chinese aluminium output close to legal capacity limit?; available at: https://steelnews.biz/chinese-aluminium-output-close-legal-capacity-limit/ (accessed on 8 August 2023).

- *enterprises [were] small and scattered;*
- *intervention of local governments*
  - [which] *attracts and encourages investment in electrolytic aluminium enterprises through various preferential conditions, resulting in blind expansion of production capacity*
  - *in order to prevent enterprises from stopping production or moving out, implement subsidies for electrolytic aluminium enterprises, such as using electricity price subsidies, carrying out direct power supply for large users*
- *short-sighted behaviour of enterprises*
  - [as] *threshold of the electrolytic aluminium industry is low,* [...] *most enterprises with sufficient funds will have the impulse to invest in the electrolytic aluminium industry*[1908].

Apart from permitting new projects, local governments also implemented policies that directly ran counter to central directives. For example, in May 2010, the NDRC published the Notice on Cleaning Up Preferential Electricity Prices for High Energy Consumption Enterprises[1909], prohibiting local governments from providing cheap electricity to energy intensive enterprises including certain aluminium enterprises[1910]. However, because of an abundance of coal and cheap coal-fired electricity, western provinces like Shaanxi, Ningxia, Qinghai and Gansu did not cease their preferential electricity price policies[1911] (see Section 10.2.1.2.2). For example, from 2012 to 2016, Xinjiang's yearly aluminium output increased from 1.02 million to 6.37 million tonnes, making up approximately 20% of domestic production. By June 2017, total aluminium capacity in Xinjiang amounted already to 7.68 million tonnes. According to certain data, in 2021 the production capacity of electrolytic aluminium in Xinjiang was 6.53 million tons per year with projections of an output of 5.99 million tons in 2022[1912]. This is likely because in 2015, in Xinjiang, the cost of electricity was 37.3% lower than the average electricity price for the national electrolytic aluminium industry[1913]. In recent years, with the increasing environmental requirements regarding electricity production, provinces with clean electricity sources have become attractive locations for electrolytic aluminium production, such as Yunnan, which is rich in hydropower[1914].

1908 State Information Centre: Analysis of China's aluminium industry overcapacity issues and solutions; available at: http://www.sic.gov.cn/News/455/4113.htm (accessed on 8 August 2023).

1909 Available at: http://www.gov.cn/zwgk/2010-05/17/content_1607555.htm (accessed on 9 August 2023).

1910 Yicai: Aluminium capacity expansion continued, despite suffering from overall losses; available at: https://www.yicai.com/news/1960999.html (accessed on 9 August 2023).

1911 Economic Information Daily: Worrying over growth downturns, western region releasing preferential policies to support high energy consumption industries; available at: http://jjckb.xinhuanet.com/2012-07/24/content_389459.htm (accessed on 9 August 2023).

1912 See MySteel: https://m.mysteel.com/23/0313/10/A887BF330F8504BE_abc.html (accessed on 9 August 2023).

1913 China Bond Rating (original source unavailable): Xinjiang Uyghur Autonomous Region's aluminium industry development for the past seven years; available at: https://news.cnal.com/2017/06-20/1497923483480254.shtml (accessed on 9 August 2023).

1914 Shandong Weiqiao to move 2.03 MT aluminium capacity from Shandong to hydro power rich Yunnan; available at: https://www.alcircle.com/news/shandong-weiqiao-to-move-203-mt-aluminium-capacity-from-shandong-to-hydro-power-rich-yunnan-49505 (accessed on 9 August 2023).

In view of the above, China still is reorganising the aluminium industry in order to reach the goals of capacity control, consolidation and greener production methods. Over the last nearly twenty years, a number of measures to this end were put in place[1915], including more recently:

- NDRC, MIIT, Ministry of Land and Resources ('*MLR*') and MEP Notice on a Special Action Work Plan for Rectifying Illegal and Irregular Projects in the Electrolytic Aluminium Industry (2017/ 656)[1916];
- MIIT Notice on Matters Concerning the Implementation of Capacity Replacement by Electrolytic Aluminium Enterprises through Mergers and Reorganizations and Other Methods (2018/12)[1917].

In 2017, China set a cap on total aluminium production capacity at 45 million tonnes[1918], after which no new capacity additions will be allowed. The initiatives at the central level to curb aluminium capacity are also reflected in a number of regulations at the provincial level, such as the 2017 Henan Province Action Plan to Resolve Excess Capacity[1919], and the 2017 Shandong Province Coal Consumption Reduction Alternative Work Action Plan, requiring closure of illegal aluminium production capacity of 2.68 million tonnes by Weiqiao and 530 000 tonnes by Xinfa Group[1920].

However, since the Government started adopting policies to reduce overcapacity, there have been consistent concerns about the actual effectiveness of these measures, due to opposition from some local governments with a strong aluminium industry presence[1921]. The reluctance of local authorities to comply with the Government's measures was, inter alia, due to the fact that closing aluminium smelters would lead to unemployment and risk of social instability[1922]. As a result, overcapacity still persists in the Chinese aluminium market.

1915 See Section 15.5.2. of the 2017 version of this Report for more details concerning the earlier policy measures.

1916 Available at: https://img06.mysteelcdn.com/wz/uploaded/youse/2017/05/12/145058.pdf (accessed on 9 August 2023).

1917 Available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/yclgy/art/2020/art_3ead75b190a9484fa08ae90bce6cf4ba.html (accessed on 9 August 2023).

1918 See at: https://pdf.dfcfw.com/pdf/H3_AP202112281537153569_1.pdf (accessed on 9 August 2023). In fact, the figure 45 million tons per year is not explicitly provided in any policy documents to be the aluminium production cap. However, it is the factual figure of China's aluminium production capacity by 2018 - see the Letter on Reply to Proposal No. 2236 (GJST 161) of the First Meeting of the 13th National Committee of the Chinese People's Political Consultative Conference, available at: https://www.miit.gov.cn/zwgk/jytafwgk/art/2020/art_9c5716cb5317439db5c637db2315be25.html (accessed on 9 August 2023). The Catalogue of Investment Projects Subject to the Approval of Governments (issued by the State Council in December 2016, available at: http://www.gov.cn/zhengce/content/2016-12/20/content_5150587.htm, accessed on 9 August 2023), explicitly prohibited any new filing or approval of any electrolytic aluminium projects, hence the figure of 45 million tons per year is widely quoted as China's production capacity cap.

1919 See at: https://www.henan.gov.cn/2017/07-03/239754.html (accessed on 9 August 2023).

1920 See at: http://finance.sina.com.cn/chanjing/gsnews/2017-08-08/doc-ifyitamv7144463.shtml (accessed on 9 August 2023).

1921 Sanderson, H. (2017). *Call to tackle China's soaring aluminium output,* Financial Times; available at: https://www.ft.com/content/2f255636-0b21-11e7-ac5a-903b21361b43 (accessed on 15 March 2023).

1922 AME Research. (2015). Smelting Subsidies Grow as Aluminium Price Falls, available at: http://www.amegroup.com/Website/FeatureArticleDetail.aspx?faId=156 (accessed on 9 August 2023);

15.3. REGULATORY FRAMEWORK

Aluminium is a very strictly regulated industry, and the Government plays a key role in the development of the sector. The plans, directives, guidelines and other documents described in this section show the extent of Government influence and intervention exerted over the sector.

15.3.1. THE CENTRAL LEVEL SECTORAL 14TH FYPS AND STANDARD CONDITIONS APPLICABLE TO THE ALUMINIUM INDUSTRY

The 14th Raw Materials FYP[1923] includes provisions concerning aluminium. Aluminium products are covered by the provisions of the 14th Raw Materials FYP that are horizontally applicable to raw materials[1924], but the Plan also contains a number of provisions that refer explicitly to aluminium products, such as the requirement to "[i]*mplement actions to consolidate and improve bulk basic materials and, on the basis of optimised production processes, guide enterprises to use the new generation information technologies such as industry internet so as to improve the overall competitiveness of* [...]*, high-strength aluminium alloy,* [...]"[1925] or the calls for capacity control in the aluminium sector: "[s]*trictly control newly increased production capacity. Improve and strictly implement production capacity replacement policies for* [...] *the electrolytic aluminium sector, prevent the blind and disorderly development of* [...] *and aluminium oxide*"[1926].

The 14th Raw Materials FYP also entails geographical distribution of different industries in China. The chapter "*Ensure guidance towards a reasonable layout*" reads as follows: "*Improve the layout of new production capacities. Implement national and regional key strategies, coordinated regional development strategies, and key functional areas strategies, and encourage the raw materials industry to optimize and adjust spatial layout.* [...] *Ensure the orderly arrangement of projects using overseas resources such as aluminium oxide projects in coastal areas*" The plan further envisages creation of industrial clusters: "*Foster the development of standardized industry clusters.* [...], *foster the shift in the layout of the electrolytic aluminium sector from "coal — electricity — aluminium" to "hydropower, wind power and other clean energy sources — aluminium*"[1927].

The 14th Raw Materials FYP lastly provides for transformation of the aluminium sector, through the promotion of advanced technologies: "*We [shall] do research and promote ultra-low emissions in key sectors including chemical, coking, electrolytic aluminium* [...]"[1928].

Reuters. (2009). *China tries, again, to curb industrial overcapacity.* Available at: https://www.reuters.com/article/idUSPEK159245 (accessed on 15 March 2023).

1923 Full text of the plan available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2021/art_2960538d19e34c66a5eb8d01b74cbb20.html (accessed on 9 August 2023).

1924 For example Sections II.(II)-(IV) and IV(II)-(IV) of the 14th Raw Materials FYP.

1925 Section III.3 of the 14th Raw Materials FYP.

1926 Section IV.1 of the 14th Raw Materials FYP.

1927 See Section IV(II) of the 14th Raw Materials FYP.

1928 See Section V(II) of the 14th Raw Materials FYP.

A number of industry guidance elements for the aluminium sector are also included in the 14th FYP on the Green Development of Industry[1929]. The Plan underlines the importance of capacity control: "*Strictly implement capacity replacement policies for industries such as steel, cement, flat glass and electrolytic aluminium*"[1930]. Furthermore, the Plan envisages technological reforms to reduce red mud discharge from the alumina production process as well as to promote efficient low-carbon aluminium electrolysis.

In addition to the sectoral FYPs, the Standard Conditions Applicable to the Aluminium Industry (2020) ('*Standard Conditions*')[1931], issued by the MIIT in 2020 (replacing the 2013 version of the document), set the overall framework for the operation of the aluminium industry at the central level. Nominally, the Standard Conditions pursue the objective to: "*promote the supply-side structural reform of the aluminium industry, promote the technological development of the industry, and promote the high-quality development of the industry*" and specify their scope as follows: "*The standard conditions are applicable to bauxite mining, alumina, electrolytic aluminium, and secondary aluminium enterprises*".

The Standard Conditions provide that all industry participants within their scope are obliged to comply with the industrial policies and plans[1932]:

> *Bauxite mining, alumina, electrolytic aluminium and secondary aluminium production must comply with national and local industrial policies, mineral resource plans, environmental protection and energy conservation laws, regulations and policies, mining laws, regulations and policies, safety production laws, regulations and policies, industry development plans and other requirements.*

Consequently, the Standard Conditions complement the relevant legal framework, making it even more explicit that both SOEs and private enterprises must comply with governmental guidance concerning the development of the aluminium sector.

15.3.2. 14TH FYPS AND OTHER POLICY MEASURES AT SUB-CENTRAL LEVELS

While the central level 14th FYPs provide rather general guidance concerning the development of the aluminium industry, the provincial and local plans are much more detailed and specific, providing detailed goals and targets encompassing every aspect of the industry's development. The extent of China's management of the aluminium industry at the sub-central level is evident in the guidance documents released by these provincial and local authorities. For example, as will be shown below, Shandong province sets out specific industrial targets falling under the chapeau of aluminium industry modernisation. The provinces of Henan and Yunnan also adopt a number of measures intervening deeply into the aluminium industry, including with respect

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1929 See 14th FYP on the Green Development of Industry. Available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2021/art_4ac49eddca6f43d68ed17465109b6001.html (accessed on 9 August 2023).

1930 See Section III.2 of the Plan.

1931 Standard Conditions Applicable to the Aluminium Industry (Announcement 6), issued by MIIT on 28 February 2020, https://www.miit.gov.cn/zwgk/zcwj/wjfb/yclgy/art/2020/art_824a381780ea4607821b89b4b848976e.html (accessed on 9 August 2023).

1932 See Point 1.1. of the Standard Conditions.

to reorganisations, mergers, relocations, strict production targets, and capacity caps -- with additional funding foreseen for those purposes.

In addition, in recent years, China has put a strong focus on the green development of various industries, including the very energy-intensive aluminium sector. However, the measures implemented according to the plans often go beyond strictly environmental actions and the aluminium sector remains closely monitored, steered and, to a large extent, shaped by governmental intervention which goes well beyond general support to a country's industry, amounting instead to strict control and governmental management of every aspect concerning the industry.

15.3.2.1. MEASURES AT THE PROVINCIAL LEVEL

15.3.2.1.1. Shandong

One example of provincial level policy measures is the Shandong Province 14th FYP on Aluminium Industry Development (*'Shandong Plan'*)[1933]. The Shandong Plan starts by listing the achievements in developing the aluminium industry during the 13th FYP period, including construction of leading aluminium enterprises: "*A constellation of aluminium-processing backbone enterprises has been formed, including Shandong Weiqiao Pioneering Group Co. Ltd., Shandong Xin Fa Group Co. Ltd., Shandong Nanshan Aluminium Co. Ltd., Shandong Innovation Metal Co. Ltd., Longkou Conglin Aluminium Material Co. Ltd., Shandong Huajian Aluminium Group Co., Ltd. and Shandong Sanxing Group* [...]."

Further, the Shandong Plan sets out general goals for the local aluminium industry development, including: "[...] *give full play to advantages of the scale of the aluminium industry in the province and focus on the aluminium deep-processing industry, effectively enhance the industry's innovation capacity, deeply promote the extension of industry chains, strive to achieve a reasonable structure for the aluminium industry, optimise the layout, improve quality and efficiency and speed up the shaping of Shandong as a world-class, high-end aluminium industrial base*"[1934].

The Shandong Plan then lists some very specific targets, for example: "*By 2025, the value of aluminium industry output will reach RMB 800 billion, the end-products' market size shall continue to expand, with high value-added products accounting for over 60%, and the ratio of aluminium material production volume / electrolytic aluminium production volume will exceed the national average, reaching 2.5:1. The province will evolve into a major aluminium industrial cluster with significant domestic and overseas influence.*" And further: "*By 2025, the production capacity of electrolytic aluminium and aluminium oxide will be controlled, the electrolysers will reach the advanced production capacity of 400 kA and beyond, and the energy consumption (direct current) per tonne of aluminium for electrolytic aluminium will be reduced to about 12 500 kWh*"[1935].

1933 See https://h5.drcnet.com.cn/docview.aspx?version=integrated&docid=6289467&leafid=3046&chnid=1024 (accessed on 9 August 2023).

1934 See Section II.1 of the Shandong Plan.

1935 See Section II.3 of the Shandong Plan.

The Shandong Plan also contains a number of instructions as to the location of the aluminium plants. The Plan calls for the strengthening of specific areas: "*the three core areas: Binzhou, Liaocheng and Yantai, and the two functional areas: Weifang and Linyi.*" For each of those areas, the Shandong Plan is very specific as to the production facilities and materials to be manufactured in each location. As an example illustrating the level of detail of the Plan, for the Binzhou location, the following is envisaged:

> *Build the core area of Binzhou, characterized by the presence of the entire industry chain, and shape the city industry layout with Zouping, Binzhou Economic and Technological Development Zone and Beihai Economic Development Zone as centres. Give play to the role of leading and backbone enterprises so as to further expand the production scale and the advantages of a whole industrial chain, focus on the development of five main areas including lightweight and high-strength aluminium alloys, aluminium sheets and foils, 3C electronics, lightweight vehicles, and aluminium home furnishing. Ensure breakthroughs in the development of mid- to high-end products such as pistons, car wheels and hubs, automotive plates, and high-performance aluminium-alloy forgings for automotive chassis, and end-products made with aluminium instead of steel, wood, plastic and others. With the support of scientific and technological research and development platforms such as Weiqiao Guoke Binzhou Science and Technology Park, breakthroughs will be made in the areas of high-purity aluminium, aluminium-based composite materials, special-sized component preparation technologies and aluminium-alloy welding technologies. Speed up the construction of the Shandong Aluminium Valley public-service platform and unleash the supporting and driving forces of public services, commodity trading, finance, logistics and technological innovation, in order to create a "China Aluminium Valley"*[1936].

In addition, the Shandong Plan identifies four sectors in the aluminium industry which need to be developed/strengthened: aluminium smelting, aluminium alloys, aluminium-based composites, aluminium processing and deep-processing. For each of these aluminium processing types, the plan sets out concrete goals and objectives to be achieved in the next 5 years, such as "[t]*o focus on making breakthroughs in energy-saving and consumption-reducing technologies*" and "*to improve the preferential fiscal and tax policies for aluminium recycling, to support the upgrading and transformation of equipment of aluminium-recycling enterprises*" with respect to aluminium smelting, "[t]*o speed up the development of aluminium matrix composite materials in the fields of aerospace, nuclear energy, automobile transport, and electronic packaging, for instance,* [t]*o enlarge the research scope of reinforcing phases for aluminium matrix composites and to deepen the understanding of the reinforcement-phase strengthening mechanism*" in the case of aluminium-based composites etc[1937].

Furthermore, the Shandong Plan suggests that the local municipalities formulate their own FYPs to ensure coordinated development of the industry throughout the province:

1936 See Section III.1 of the Shandong Plan

1937 See Sections IV.1-4 of the Shandong Plan.

"*Municipalities should build on this plan to draw up regional aluminium industry development plans so as to achieve a coordinated development of the industry*"[1938].

Finally, the Shandong Plan sets out financial and other support measures for the local aluminium enterprises: "*Increase policy and regulatory support. Actively implement various national and provincial-level support policies, provide support to eligible industrial clusters, key products and key technologies. Support enterprises undertaking major national and provincial projects. Make good use of the package of policies supporting key energy transition projects, foster pioneering enterprises by providing support from aspects including fiscal incentives, land supply, green energy allocation, tax cuts, and technological innovations, and implement tax incentives for aluminium recycling. Encourage provincial-level equity investment funds to invest in the R&D and industrialisation of new key products, and attract investment from social capital*"[1939].

Other than the Shandong Plan, the province also has in place the Shandong Province Implementing Plan on Fostering Advanced Manufacturing Clusters and Creating High Quality Manufacturing Development and Demonstration Areas 2021-2025[1940], which includes specific local measures to support the aluminium industry. Point 2.10 of the document provides the following[1941]:

> *Binzhou Lightweight Aluminium New Material Industry Cluster. Take the Binzhou Aluminium Industry Association as the main body to promote the development of the cluster, with the "World Aluminium Valley" in Binzhou City as the centre, rely on Shandong Weiqiao, and take Bohai Science and Technology Innovation City, Bohai Advanced Technology Research Institute, Weiqiao National Science Research Institute (i.e., "one City and two institutes") as engines, focus on the lightweight, smart and high-end aluminium materials, focus on the R&D and production of auto parts, vehicle preparation, rail transit, aluminium-based new materials, etc., deepen global strategic cooperation and accelerate R&D on new lightweight aluminium materials and components for aerospace, shipbuilding and marine engineering, etc., promote the combination of industry, academia and research, contribute to the development of aluminium deep processing industries in Yantai and Weifang through a spillover effect, and create a lightweight aluminium new material industry cluster with worldwide influence in Binzhou.*

15.3.2.1.2. Yunnan

The Yunnan Province Action Plan on Reshaping the Whole Chain of Nonferrous Metals and New Material Industries with New Advantages 2021-2023 (*'Yunnan Plan'*)[1942] also contains measures steering the development of the aluminium industry. For example, the section titled

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1938 See Section VIII.1 of the Shandong Plan.
1939 See Section VIII.2 of the Shandong Plan.
1940 Available at: http://www.junan.gov.cn/info/1021/112763.htm (accessed on 9 August 2023).
1941 See Point 2(10) of the Plan.
1942 Available at: http://www.yn.gov.cn/ztgg/lqhm/lqzc/djzc/202202/t20220223_236886.html (accessed on 9 August 2023).

"[c]reate specific advantages of green aluminium industry" lists measures that go far beyond environmental concerns[1943]:

> *1. Promote the projects under construction so as to start production as soon as possible; promote the proposed projects in a scientific and stable manner; further increase the efforts to attract investment; introduce, gather and foster a group of key enterprises in the industry chain, leading backbone enterprises, and supporting enterprises, and strive to achieve aluminium alloy and aluminium processing capacity of more than 8 million tons; expand the advantageous industrial scale, speed up the industry chain extension towards deep processing and end-products manufacturing, and promote the construction of 2-3 zero-carbon green aluminium industrial parks.*
>
> *2. Promote the accelerated construction of projects supporting deep processing in Wenshan Green Aluminium Innovation Industrial Park, such as the projects of Shandong Innovation, Jiangsu Kailong, Zouping New Ternary Aluminium, Jiangyin Tianyang Metal Products, etc.; vigorously introduce enterprises with technological advantages in the design, processing, manufacturing, application, and other fields of aluminium alloy lightweight materials and encourage them to actively develop high-end aluminium alloy deep processing; accelerate the development of downstream products such as construction aluminium, packaging aluminium, equipment aluminium, etc., and constantly expand the range of aluminium deep-processing products; focus on the development of high-end new materials such as automotive body panels, rail transit aluminium, building formwork, aluminium alloy fence, new energy power battery foil, forged aluminium wheels, aluminium welding wires, etc., to create the advantages of green aluminium deep processing.*

Moreover, the Yunnan Plan also puts forward measures to lower the operating costs of the aluminium industry by the means of preferential tax policies[1944]:

> *Implement preferential tax policies for the development of the western region, and duly conduct investigation and registration of relevant enterprises for the green silicon industry, green aluminium industry and non-ferrous metal deep processing industry listed in the catalogue of encouraged industries in the western region; provide unsolicited advice and services to help enterprises reduce their tax burden.*

15.3.2.1.3. Guangxi

In September 2022, the Standing Committee of the People's Congress of Guangxi Zhuang Autonomous Region issued the Decision on Promoting the High-quality Development of the Aluminium Industry (*'Guangxi Decision'*)[1945], which sets out a number of objectives for the aluminium industry development in the province.

1943 See Section III.2 of the Yunnan Plan,

1944 See Section IV.3(3) of the Yunnan Plan.

1945 Available at: https://gxrd.gov.cn/html/art175354.html (accessed on 10 March 2023).

To start with, the Guangxi Decision provides for the following[1946]:

> *The people's government of the autonomous region shall, based on the new development stage, scientifically plan the development of Guangxi's aluminium industry, organize regular review of the five-year plan for the development of Guangxi's aluminium industry as a sector-specific priority plan for the whole region, strengthen the clustering and leading functions of the two core areas Baise and Nanning, and give full play to the advantages of Beibu Gulf's coastal location;* [...]. *Strive to achieve two rounds of 'double increase' in terms of the output value of the aluminium industry by 2030, based on the output value of such in 2021.*

Under point 3, the Guangxi Decision addresses the issue of bauxite accessibility, including the following provisions controlling bauxite mining in the province[1947]:

> *Implement a new round of prospecting for bauxite. Increase efforts to explore for sedimentary bauxite and other resources with financial support from the autonomous region. [...] Newly discovered bauxite resources will be preferentially allocated to enterprises that extend the industrial chain of high-value-added aluminium deep-processing in the autonomous region. Support local enterprises going out and participating in the exploration of overseas bauxite resources, and increasing the development of bauxite with mining interests. Build a bauxite resource import and trading platform and turn Guangxi Beibu Gulf Port into an important distribution and trading base for bauxite import in the south of China.*

Furthermore, the Decision asks government bodies to "*accelerate the deployment of alumina projects in the coastal areas of the Beibu Gulf that utilize overseas bauxite resources, reasonably determine the scale of production capacity, and focus on introducing high-quality projects*". The Decision further requires that such alumina projects should "*obtain overseas bauxite mining rights, have advanced equipment and technology, reach the advanced value of energy consumption quota per unit product and ultra-low emission value of pollutants, and be planned simultaneously with the supporting aluminium deep processing projects*"[1948].

Concerning electrolytic aluminium, the Guangxi Decision asks government bodies to "*stabilize and optimize the quality and efficiency of existing electrolytic aluminium production capacity, accelerate the construction of electrolytic aluminium supply chains with surrounding provinces and neighboring countries, support enterprises in the autonomous region to strengthen cooperation with electrolytic aluminium enterprises inside and outside the region and the country, use market-oriented methods to increase the local supply of electrolytic aluminium to provide a robust material basis for subsequent deep processing*"[1949].

The Guangxi Decision further sets out numerical targets and calls for development of specific industries[1950]:

1946 See Point II of the Guangxi Decision.
1947 See Point III of the Guangxi Decision.
1948 See Point IV of the Guangxi Decision.
1949 See Point V of the Guangxi Decision.
1950 See Point VII of the Guangxi Decision.

By 2030, the ratio of aluminium production to electrolytic aluminium production will exceed 2:1, and the proportion of refined and deep processed aluminium products in aluminium products will exceed 60%. Government bodies shall organize and implement projects to extend and strengthen the industry chain and create a profitable aluminium deep processing industry which has both quantity and quality, and focus on developing and creating advantages in the following sectors: aluminium for lightweight automobiles, aluminium for new energy sources such as photovoltaics and batteries, aluminium used for power, aluminium used for food and medicine packaging, aluminium for electronic appliances, and aluminium for construction and home furnishing. Continued support shall be provided for the development of high-end products such as aluminium for aerospace, ships, and railways [...].

The Guangxi Decision also includes provisions on financial support specially designed for companies in the sector of deep processing of aluminium[1951]:

Support policies such as interest discounts and financial subsidies will be granted to aluminium companies that purchase, introduce, transform and upgrade high-end large-scale rolling, extrusion, forging, and casting equipment.

Moreover, the Guangxi Decision specifies goals regarding cultivating leading enterprises and steering the development path of SOEs in the province[1952]:

Cultivate and introduce a group of leading enterprises with core competitiveness. Establish an 'industrial chain leader' system in the aluminium industry, for enterprises leading the alumina and electrolytic aluminium industrial chains, to implement a comprehensive energy efficiency evaluation and incentive mechanism covering the whole industry. If the energy consumption intensity of the whole industrial chain is lower than the controlled value of the energy consumption intensity of new industrial projects in our entire region, then comprehensive support policies will be provided [to the industrial chain leaders], such as to provide priority guarantee in terms of production factors, rewards for industry chain extension and repair, and rewards for investment. Implement specific investment promotion along Guangxi's key aluminium chains and industrial clusters; promote the coordinated development in upstream and downstream chains; and increase the level of local support and anchoring of the aluminium industry. Strengthen efforts to foster small and medium-sized enterprises in the aluminium industry, focus on building up a group of specialized, professional, special and new 'little giant' enterprises in the field of aluminium deep processing, as well as champion enterprises in the field of aluminium manufacturing industry; and further promote the brand of Guangxi Aluminium. Improve the development quality and efficiency of aluminium-related state-owned enterprises, support Guangxi Investment Group and other state-owned enterprises to optimize and integrate their internal aluminium business; take and use capital to deploy the

1951 See Point VIII of the Guangxi Decision.
1952 See Point XV of the Guangxi Decision.

aluminium industry chain across provinces and countries via mergers and acquisitions, participating or controlling equity interest or other methods, so as to implement coordinated development of the whole industrial chain and build up leading enterprises in the aluminium industry with national influence and international competitiveness.

In addition, the Guangxi Decision calls for the creation of aluminium production clusters: "*Develop aluminium industry clusters: increase the support of special government bonds to the infrastructure construction of parks, focus on fostering a key aluminium industry park that has specific market positioning, distinctive professional characteristics, industry chains and industry clusters, strong innovation capabilities and good industrial coordination*"[1953].

Finally, the Guangxi Decision provides for various types of financial support to help attain the development goals of the aluminium industry in the region[1954]:

[E]*stablish a special fund for the high-quality development of the aluminium industry and increase support for the transformation and upgrading of the aluminium industry. Give full play to the guiding role of Guangxi Industrial High-quality Development Fund*[1955] *as well as of government industry investment funds at all levels; encourage leading enterprises in alumina and electrolytic aluminium industry and social capital to participate in the establishment of aluminium industrial investment funds to focus on supporting aluminium deep processing and high value-added aluminium industry projects. Encourage financial institutions to innovate and develop aluminium supply chain finance, technology finance, and green finance for the aluminium industry, and to implement differentiated credit support policies for alumina and electrolytic aluminium enterprises' projects such as energy conservation and emission reduction, technological transformation, industrial chain extension and repair, and comprehensive utilization of resources. Support qualified aluminium companies to be listed on domestic and foreign stock exchanges, and to be listed on the New Third Board and regional equity trading markets. Guide aluminium enterprises to receive direct financing through the bond market. Support the securitization of the debt assets of aluminium enterprises via financial leasing. Adjust and optimize the fiscal and taxation support policies for the aluminium industry; adjust the focus of support to key areas of the industry chain such as aluminium deep processing, technology research and development, supply chain security, energy conservation and emission reduction, as well as the development of recycled aluminium.*

15.3.2.1.4. Henan

The Henan Steel, Aluminium, Coal, Chemical and Cement Industry Upgrade and Development Action Plan 2018-2020 (*'Henan Plan'*)[1956] represents a good example of how the objectives

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1953 See Section XVI of the Guangxi Decision.

1954 See Point XVIII of the Guangxi Decision.

1955 For additional information concerning the Fund, see at: http://www.sasac.gov.cn/n2588025/n2588129/c15334023/content.html (accessed on 11 March 2024).

1956 Available at: https://www.waizi.org.cn/policy/52055.html (accessed on 13 October 2023).

limiting emissions and reducing the industry's environmental footprint may translate into strict regulation of the aluminium industry which entails not only capacity control but also production targets in terms of product portfolio and production volumes, as well as oversight of the corporate structure of the sector..

At the outset, the Plan states: "*At present, the aluminium industry has entered a period of green transformation, quality improvement and efficiency increase. Accelerating transformation and development is the only option for Henan's aluminium industry to become better and stronger*"[1957].

The concrete measures set out in the Henan Plan include elements by which authorities very closely regulate the aluminium industry. For example, the first principle listed in the plan reads as follows: "*Taking into account market demand and user demand comprehensively, aim for high-end and foster reform, transformation and development, improve the level, take a high-end position, and strive to achieve high-end products, high-end value, and high-end technology*"[1958].

The Henan Plan furthermore limits additional capacity build-up: "*It is strictly forbidden to add new electrolytic aluminium production capacity and aluminium carbon production capacity*". It also envisages intervention into supply and purchase relationships of enterprises, their location and even their corporate structure: "*promote the integration and reorganization of backbone enterprises and support enterprises to join parks, create an environment favourable to industry development, create influential aluminium processing industry clusters*"[1959].

In addition, the Henan Plan sets out specific targets in terms of production capacity and industry layout: "*Work objectives. By 2020, the annual production capacity of electrolytic aluminium will be stabilized at about 2.5 million tons, the annual production capacity of aluminium material processing will remain above 12 million tons, and the added value per ton of competitive products will exceed RMB 10,000.* [...] *Foster 2 - 3 industrial clusters worth RMB 100 billion shall and build an internationally competitive and strong aluminium industry province*"[1960].

Furthermore, the provincial authorities even envisage to intervene into the product portfolio and marketing strategies of enterprises: "*Adjust and optimize a number of products and brands. Focusing on specific and specialized development, support key aluminium processing enterprises to scientifically determine product positioning, implement a number of deep processing projects having a driving role, cultivate specific products and competitive products on the basis of the 'one enterprise, one policy' principle, and create internationally competitive product brands*"[1961].

The Henan Plan also lists specific projects and enterprises to be supported by the provincial government:

1957 See Section I.1 of the Henan Plan.
1958 See Section I.3.1 of the Henan Plan.
1959 See Sections I.3.2-3 of the Henan Plan.
1960 See Section I.4 of the Henan Plan.
1961 See Section II.1 of the Henan Plan.

Make a number of enterprises and clusters bigger and stronger. Give full play to the advantages of the market, to resources and to industrial bases, accelerate the expansion of leading enterprises and industrial clusters. Support Mingtai Aluminium, Wanda Aluminium, Xingfa Aluminium, Hengmei Aluminium and other enterprises to develop into leading aluminium processing enterprises focussing on high-end products; vigorously introduce well-known domestic and foreign aluminium processing enterprises, integrate resources in order to build high-end aluminium processing projects, Develop and shape leading enterprises with a driving and leading role. Encourage Yulian Group, Yichuan Electric Power, Wanji Holdings, Shenhuo Group and other enterprises to give full play to their industrial base advantages to build deep processing projects and ensure an integrated development. Encourage domestic aluminium processing enterprises or electrolytic aluminium enterprises to build new high-end aluminium processing projects and allow them to build electrolytic aluminium supply bases in advantageous areas outside the province through production capacity swaps, and form the industrial integration of high-end processing in the province together with the front-end supply outside the province, both being related through capitalistic links. Relying on the aluminium processing industry clusters such as Luoyang, Gongyi, Changge, etc., to actively promote the experience of attracting investment through business, introduce small and medium-sized aluminium deep processing companies around backbone enterprises, develop recycled aluminium in the areas with a high concentration of waste aluminium resources, build a group of specific and well-known aluminium deep processing specialised parks of worth RMB 10 billion, create influential RMB 100 billion worth aluminium processing industry clusters. Develop provincial demonstrations programmes for the transformation and development of aluminium industry in Gongyi, and build aluminium product brand centres, R&D centres, education centres, new product release centres and ecological aluminium industry demonstration bases with a large international influence.

In the part concerning greening of the aluminium industry, the Henan Plan envisages, among things, the following: "*Withdraw production capacities of electrolytic aluminium from the central urban area of the city and eliminate production capacities of plants below 200 000 tons capacity each*"[1962], thereby again effectively setting production capacity.

The Plan further sets out measures to improve the competitiveness of the aluminium industry[1963]:

Enhance the competitiveness of electrolytic aluminium. It is strictly forbidden to increase the production capacity for electrolytic aluminium, the production capacity of electrolytic aluminium shall be stabilised at about 2.5 million tons, the synergy of the whole industry chain shall be strengthened. Explore the win-win operating mode of aluminium and electricity, take the electricity system reform as

1962 See Section II.2-3 of the Henan Plan.
1963 See Section II.4 of the Henan Plan.

an opportunity and improve the price policy of captive power plants, collect fees on the basis of the minimum amount in accordance with laws and regulations; Explore the shutdown pattern of coal-based captive power plants and encourage electrolytic aluminium enterprises, after shutting down their own generators, to replace them and switch to self-generated and self-consumed electricity produced by large, highly-efficient and clean units, and additionally to participate in direct market transactions and strive not to exceed the previous electricity price level after the shutdown. Improve the bank creditor committee system for backbone electrolytic aluminium enterprises, explore effective ways to extend the loan repayment cycle, and support enterprises to raise funds through debt-to-equity swaps, equity transfers, and overall listing in order to reduce corporate debt ratios.

Another area discussed in the plan is the cooperation between enterprises in the aluminium industry[1964]:

Promote transformation and upgrading through organizational innovation. While building a modern enterprise organization system based on sharing benefits, sharing risks and integrating the industry chain, strengthen the cooperation between aluminium processing enterprises and electrolytic aluminium production enterprises, promote the joint reorganization between upstream and downstream backbone enterprises, improve the overall business efficiency through energy balance, materials supply and demand balance, and R&D sharing; explore organizational innovation thanks to a reasonable distribution of profits. Enterprises are encouraged to participate in the development and operations of domestic and foreign mines by means of equity participations, acquisitions, and equity swaps".

Finally, the Plan includes provisions concerning government support, including financial, to the aluminium sector, explicitly linking the government action to the national industrial policies[1965]:

Comprehensively use market mechanisms, economic tools, legal measures and necessary administrative tools to promote the transformation and upgrading of enterprises. Support eligible provincial cities to set up aluminium industry development funds, [...] *provide financial support to key projects and to initiatives to integrate the whole industry chain. Make full use of existing financial funds and governmental investment funds to support eligible key aluminium processing projects,* [...], *and provide support in terms of land and infrastructure. Strictly implement the national industrial policy,* [...], *and strictly punish illegal activities such as the increase of electrolytic aluminium and aluminium carbon production capacities, and the unauthorized construction of projects that violate the requirements of industrial policies or industrial layout planning.*

15.3.2.2. MUNICIPAL LEVEL MEASURES

1964 See Section III.2 of the Henan Plan.
1965 See Section III.3 of the Henan Plan.

The objectives and corresponding regulatory and support measures laid down at the provincial level, as described in Sections 15.3.2.1.1 - 15.3.2.1.4, are then implemented individually by municipalities in the province through local implementation plans. One example of such a plan is the Sanmenxia Municipality Aluminium Industry Upgrade and Development Implementing Plan (*'Sanmenxia Plan'*)[1966], which envisages more specific measures to achieve the goals set out in the Henan Plan[1967]:

> *Further optimize the construction environment of the first-phase project (300,000 tons) of Baowu Aluminium Technology Co., Ltd. with an annual output of 600,000 tons of aluminium alloy deep processing project and strive to be completed and put into operation in 2020.* [...] *Provincial-level industrial agglomeration areas with aluminium industry as the leading industry, such as the urban-rural integration demonstration area and the Mianchi county industrial agglomeration area, will expand investment promotion, introduce specific enterprises, rely on large aluminium processing enterprises, and vigorously develop high-end aluminium alloy new materials as raw materials in order to manufacture deep processing aluminium products for the aviation, railways, automobile, shipbuilding, and military sectors, promote the expansion of aluminium deep processing products to high-strength and high-toughness aluminium alloys and high-end deep-processing aluminium alloys. Encourage small and medium-sized enterprises to focus on construction, furniture, packaging, power generation and other application sectors, and develop products such as building forms, building maintenance boards, aluminium furniture, tank materials, packaging aluminium foil, and aluminium guide rods (wires)* [...].

Over and above the objective of introducing '*specific enterprises*', the Sanmenxia Plan envisages further measures to attract investment in the area[1968]:

> *Allow some electrolytic aluminium enterprises to build electrolytic aluminium supply bases in areas with advantageous resources and environment outside the province through production capacity replacement, create an industrial integration pattern of high-end processing (in the province) and upstream supply outside the province) both related by capitalistic links. By 2020, the production capacity of electrolytic aluminium in the central urban area of the city will be withdrawn. Support the Sanmenxia Urban-rural Integration Demonstration Zone to take advantage of the convenient transportation to build an alumina and electrolytic aluminium logistics, storage and exchange centre; attract electrolytic aluminium production enterprises from Xinjiang and Inner Mongolia to set up electrolytic aluminium storage and delivery warehouses in our city; guarantee the supply of raw materials for aluminium deep processing enterprises in our city. Support Mianchi County's industry cluster to take advantage of resources to build warehousing and*

1966 Available at: wjbb.sft.henan.gov.cn/upload/HNMC/2019/10/11/20191011110352523.pdf (accessed on 13 October 2023). Explanations of the Plan available at: http://www.hubin.gov.cn/content-47-4738-1.html (accessed on 14 March 2023).

1967 See Explanations of the Plan Section VI.1.

1968 See Explanations of the Plan Section VI.2

logistics centres for alumina etc. Improve the competitiveness of the existing stock of electrolytic aluminium, strive to retain 240,000 tons of electrolytic aluminium production capacity, and enhance the coordination of the entire industry chain. Explore the win-win aspects of the joint production of aluminium and electricity and take the power system reform as an opportunity to effectively reduce the electricity price level of electrolytic aluminium.

Zhengzhou, the provincial capital of Henan, also published a plan paying particular attention to the development of the aluminium industry and echoing the objectives of the Henan Plan which called for creation of backbone enterprises and developing high-end production (see Section 15.3.2.1.4): "*Zhengzhou is the largest aluminum plate, strip and foil processing and production base north of the Yangtze River, and has cultivated a number of backbone enterprises in the fields of high-purity, high-strength, high-toughness and corrosion-resistant high-performance aluminum alloys, special alumina, high-end alumina products, high-performance wire rope materials and products, and in 2021, the added value of the city's aluminum and aluminum deep processing industry above designated size increased by 17.1%*". The Implementation Opinions on Speeding Up the Development of New Materials Industry issued by the General Office of Zhengzhou Municipal Government (*'Zhengzhou Opinions'*)[1969] contain the following objectives[1970]:

[...] *Vigorously develop new aluminium-based materials.*

[...] *Promote 'replacing steel with aluminium' and focus on the development of aluminium materials for transportation, mainly automobiles and rail transit. Promote 'replacing copper with aluminium', focus on the development of aluminium materials for high value-added power industries, vigorously develop aluminium conductors for high-voltage transmission lines, aluminium conductors for underground cables and other products, and continue to expand the application of aluminium products in electrical cables and communication cables. Promote 'replacing plastic with aluminium', develop aluminium foil for food and drug packaging, and speed up the production of end-products. Focus on key areas such as high-end alumina and high-performance aluminium products, select a batch of products that contain high technical content and added value, meet the requirements of the development of the industry, and are relatively high-end in terms of specifications, performance or technical parameters.*

Moreover, in order to support the development of the aluminium industry, the Zhengzhou Opinions propose to establish "*Zhengzhou High-end Aluminium Processing Products and High-end Alumina Products Guiding Catalogue, to guide enterprises to increase investment in research and development, expand fields of application, and continuously improve the added value of products*"[1971].

15.3.3. POLICY DOCUMENTS RELEVANT FOR ADVANCED ALUMINIUM PRODUCTS

1969 Available at: https://www.waizi.org.cn/rule/133152.html (accessed on 9 August 2023).
1970 See Section III.2 of the Zhengzhou Opinion.
1971 See Section III.2 of the Zhengzhou Opinion.

While aluminium as a broad category is not covered by Made in China 2025 (see Section 4.2.3), certain more advanced products, such as aluminium converter foil ('*ACF*') are included. One of the ten strategic sectors which Made in China 2025 identifies is '*new materials*' (Sector 9), for which Made in China 2025 sets the objectives to[1972]:

> *actively develop special new materials for both military and civilian use, speed up two-way transfer and transformation of technologies and promote integrated military and civilian development of new material industry as well as accelerate the upgrading of basic materials.*

ACF as part of *New materials* falls under the development priorities of this sector. The new materials thus benefit from the support mechanisms listed in Made in China 2025, including, among others, financial support policies, fiscal and taxation policy, and State Council oversight and support[1973]. The Commission investigations into the ACF sector found that funds had been created as part of the Made in China 2025 programme and hence for the benefit of the ACF industry[1974]. The same investigations confirmed furthermore that both the Guiding Catalogue for Industrial Structure Adjustment Restructuring (see Section 4.2.9), as well as the NDRC Catalogue of Strategic and Emerging Products and Services [1975] need to be read together and apply to the ACF sector. The combination of these two sets of rules give to the ACF sector special treatment as an encouraged industry[1976].

While aluminium is not covered by the Made in China 2025, it is included in relevant Made in China 2025 Roadmap which specifies the particular goals for each industry, providing concrete numerical targets to be achieved by 2020 and 2025.

15.4. DISTORTIONS IN ALUMINIUM PRODUCING ENTERPRISES

15.4.1. STATE INFLUENCE IN THE MARKET

The largest aluminium producers in China, which are also amongst the top 10 individual aluminium producers worldwide, include two SOEs – Chinalco[1977] and SPIC – as well as three privately-owned producers – China Hongqiao, Xinfa, and East Hope – with Chinalco being the single largest primary aluminium producer worldwide in view of its output of 6.7 million metric tonnes in 2021[1978]. According to some 2017 estimates, SOEs account for more than 50% of the

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1972 See Section VI(9) of MIC 2025.

1973 Commission Implementing Regulation (EU) 2021/2287 of 17 December 2021 imposing definitive countervailing duties on imports of aluminium converter foil originating in the People's Republic of China and amending Implementing Regulation (EU) 2021/2170 imposing definitive anti-dumping duties on imports of aluminium converter foil originating in the People's Republic of China, OJ L 458, 22.12.2021, p. 344–458, recital 100.

1974 *Ibid.*, recital 99.

1975 See at: https://www.ndrc.gov.cn/xxgk/zcfb/gg/201702/t20170204_961174.html?code=&state=123 (accessed on 9 August 2023).

1976 Commission Implementing Regulation (EU) 2021/2287, recitals 101-103.

1977 See also Section 15.3.2.1.4 concerning the Henan Plan and the links between Hengmei Aluminium and Chinalco, see at: https://www.qcc.com/firm/2a082ab9f4116ea1875d40b16a7838ee.html (accessed on 11 March 2024).

1978 See at: https://www.statista.com/statistics/280920/largest-aluminum-companies-worldwide/ (accessed on 9 August 2023).

total primary aluminium output in China[1979], but it is not clear what is the exact ratio of SOEs vs privately owned aluminium smelters. This being said, the last years have shown an increase in capacity which is attributed partly to privately-owned companies, driven in particular by the rapid growth of the China Hongqiao Group. The aluminium production capacity amongst the main SOEs has also increased in this period, though to a lesser extent[1980]. Overall, SOEs have a significant presence in the Chinese aluminium market, especially in the primary aluminium segment.

The strong intervention of the Chinese government in SOEs has been described in detail in Chapter 5. In addition to intervening into the aluminium state-owned producers, the State is also present in the private aluminium enterprises, not least given the ever-tighter Government control over the private sector as described in Section 3.3.2 Moreover, as described above in Sections 15.2 and 15.3, the strict goals concerning production, capacity, modernisation, relocations and reorganisations of individual enterprises etc., mean that all aluminium producers in China are operating under strong State influence.

In addition, a 2019 OECD study confirmed that ownership in China is not the only key factor when assessing government intervention into the aluminium sector, as SOEs are both recipients and providers of support and provide both below market value loans and below-market-cost inputs to downstream producers who can be either SOEs or privately owned companies. This in turn results in a further degree of opacity when it comes to the exact form and scale of government support in the Chinese aluminium industry[1981].

15.4.2. INDUSTRY ASSOCIATIONS

With respect to implementing the provisions contained in the regulatory documents described above, Chinese industry associations play an important role. These entities are established to guarantee that the aluminium industry implements the policies of the Government. To this end, in their activities, the industry associations liaise closely with State authorities, as is also indicated in their statutes (see Section 2.3.3).

At least two industry associations are active in the aluminium sector, i.e. the China Non-Ferrous Metals Industry Association ('*CNIA*') and the China Non-Ferrous Metals Fabrication Industry Association ('*CNFA*'). CNIA's Articles of Association[1982] stipulate notably that it aims to[1983]:

> *adhere to the basic line of the Party and various principles and policies, adhere to the purpose of serving the government, the industry, enterprises and business managers, establish and improve the industry self-discipline mechanism, bring into*

1979 Australian Anti-Dumping Commission, *Aluminium Extrusions from China*, REP 248, p. 79 (13 July 2015), as well as Taube, M. (2017). *Analysis of Market Distortions in the Chinese Non-Ferrous Metals Industry*, Think!Desk, 24 April 2017, p.51.

1980 United States International Trade Commission (USITC); *Aluminium: Competitive conditions affecting the US industry*, p. 222. Regarding the status of private companies in the aluminium sector in China, see Wiley Rein LLP (2017): *China's Broken Promises: Why it is not a Market Economy*, p. 43 and the relevant footnote (fn. 187) referred to therein.

1981 OECD (2019), "Measuring distortions in international markets: the aluminium value chain", OECD Trade Policy Papers, No. 218, OECD Publishing, Paris, p.6.

1982 Available at: https://www.chinania.org.cn/html/xiehuigaikuang/xiehuizhangcheng (accessed on 9 August 2023).

1983 See Article 2 of the Statutes of CNIA.

full play its role in giving advice and suggestions to the government, act as a bridge between the government and enterprises [...].

Moreover[1984]:

> *The Association adheres to the overall leadership of the Communist Party of China, establishes the organization of the Communist Party of China, carries out party activities, and provides necessary conditions for the activities of the Party organization in accordance with the provisions of the Constitution of the Communist Party of China The Association adheres to the overall leadership of the Communist Party of China. In accordance with the provisions of the Constitution of the Communist Party of China, it establishes an organization of the Communist Party of China, carries out Party activities and provides necessary conditions for the activities of the Party organization.* [...] *Theis Aassociation is registered and managed by the Ministry of Civil Affairs, and the entity in charge of party building work is the Party Committee of the State-owned Assets Supervision and Administration Commission of the State Council. The entity in charge of the registration and management of the Association is the Ministry of Civil Affairs and the entity in charge of its Party building is the Party Committee of the State Council's State-owned Assets Supervision and Administration Commission (SASAC).*
>
> *The Association accepts the business guidance, supervision and management by the entities in charge of registration and management, by entities in charge of party building, as well as by the relevant administrative departments in charge of industry management.*
>
> *The Association accepts the business is guided, supervised and managed by the entity in charge of its registration management, of the entity in charge of its Party building work, and of the industry administrative departments in charge of industry management.*

The business activities of the CNIA are described as follows[1985]:

> *Conduct feasibility study for infrastructure, technological transformation, technology import, investment and development projects in accordance with authorization and entrustment of relevant government departments;* [...] *In accordance with authorizations and delegations of the relevant government departments, participate in the quality management and supervision work, qualification reviews, carry out sector inspections and evaluations, proceed to the review of production and business licenses, and carry out industry injury investigation.*

The AoA further elaborate on the requirements for CNIA membership, which include, among others, to "[c]*omply with the requirements of the national industrial policy*"[1986]. The AoA also

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1984 See Article 3 of the Statutes of CNIA.

1985 See Articles 6.5 and 6.6 of the Statutes of CNIA.

1986 See Article 8 of the Statutes of CNIA.

specify the eligibility criteria for the directors of the association, including to "[a]*dhere to the leadership of the Communist Party of China, uphold socialism with Chinese characteristics, resolutely implement the Party's line, principles and policies, and have good political quality*"[1987].

CNFA's aim as stated in its AoA[1988] is exactly the same as that in the AoA of CNIA. "*The purpose of this Association is to adhere to the Party's basic line and every principles and policies, adhere to the purpose of serving the government, the industry, enterprises and business managers, establish and improve the industry self-discipline mechanism, and give full play to the government's advising and supporting function, play the role of bridge* [...]. *The Association abides by the Constitution, laws, regulations and national policies, practices the core socialist values, promotes the spirit of patriotism, abides by social morality, and consciously strengthens the construction of integrity and self-discipline*"[1989].

The AoA of CNFA also contain the same language regarding the role of the CCP and State authorities in its operation as the AoA of CNIA[1990]:

> *The Association adheres to the overall leadership of the Communist Party of China, establishes the organization of the Communist Party of China, carries out party activities, and provides necessary conditions for the activities of the party organization in accordance with the provisions of the Constitution of the Communist Party of China.*

As to the business scope of the organisation, the AoA include the following:

> *Actively put forward suggestions and opinions on industry development, industrial policies, laws and regulations in accordance with the general principles and tasks of establishing a socialist market economic system proposed by the party and the state, and in light of the actual situation of the industry*[1991].

The CNIA AoA also define a set of conditions concerning the necessary qualifications of the chairman, vice chairman and secretary general of the association, including: "*Adhere to the party's line, principles and policies, and have good political quality*"[1992].

The above AoA clearly illustrate that the two industry associations representing the aluminium industry in China are closely interlinked with the CCP and with the Government. In addition to representing the interests of the aluminium industry participants, they are actively contributing to fulfilling the industry policy objectives set by the Government and the CCP.

15.4.3. PARTY PRESENCE IN THE ALUMINIUM PRODUCING ENTERPRISES

As described in Section 3.3.2, the Company Law stipulates that a CCP organisation is to be established in every company with at least three CCP members. Not surprisingly, these rules are also followed in the aluminium sector. As already explained in the 2017 version of this

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1987 See Article 21.1 of the Statutes of CNIA.
1988 Available at: http://www.cnfa.net.cn/about/1546.aspx (accessed on 9 August 2023).
1989 See Article 2 of the Statutes of CNFA.
1990 See Article 3 of the Statutes of CNFA.
1991 See Articles 6 of the Statutes of CNFA.
1992 See Article 33 of the Statutes of CNFA.

Report[1993], in 2017 a Chinese state-owned aluminium producer, China Aluminium International Engineering Corporation Limited ('*Chalieco*'), amended its Articles of Association giving more prominence to the role of Party cells within the company.

Subsequent Commission investigations into the aluminium industry in China have shown that other aluminium producers too have Party committees which are actively involved in the decision making of companies. In the ACF investigation, the Commission found that according to the 2017 Annual Report of the Aluminium Corporation of China ('*Chalco*')[1994], a number of directors, supervisors, and senior management – including the Chairman and Executive Director, and the Chairman of the Supervisory Committee – are members of the CCP[1995]. Another producer active in the production of ACF, Xiamen Xiashun, a private enterprise, presents the Party building exercises in the following way:

> *Xiashun actively promotes Party building and labour union work and remains committed to the system of joint meetings between Party, government and workers over the years, providing an important platform for employees to participate in decision-making, protect their rights and interests, and build a harmonious atmosphere*[1996].

The presence of CCP representatives among the management of the companies was also confirmed in the anti-dumping investigation into aluminium extrusions, where the Commission found evidence of such presence in the case of Chalieco, Chalco, the Xinfa Group, the Hongqiao Group, as well as the Liaoning Zhongwang Group[1997].

Moreover, the Commission's anti-dumping investigation into aluminium flat-rolled products[1998] established that the management of three aluminium flat-rolled manufacturers – Southwest Aluminium, Jiangsu Alcha Group and Chalco Ruimin – included CCP members. Furthermore, it was found that a number of aluminium flat rolled product manufacturers organised Party building activities for their employees, for example Southwest Aluminium: "*in order to implement the requirements of General Secretary Xi Jinping, following the political building efforts, the Southwest Aluminium (Group) Co., Ltd's Party Committee shall vigorously promote the building of Party study branches, ensure effective full coverage of Party organizations and Party work, foster the 'double promotion' of Party members, and better involve Party members as pioneers and models*". Other companies for which Party building

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1993 See Section 15.2. of the 2017 version of this Report.

1994 Part of the Chinalco Group.

1995 See Commission Implementing Regulation (EU) 2021/983 of 17 June 2021 imposing a provisional anti-dumping duty on imports of aluminium converter foil originating in the People's Republic of *China, OJ L 216, 18.6.2021, p. 142–201,* recital 96; Commission Implementing Regulation (EU) 2019/915 of 4 June 2019 imposing a definitive anti-dumping duty on imports of certain aluminium foil in rolls originating in the People's Republic of China following an expiry review under Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council, *OJ L 146, 5.6.2019, p. 63–97,* recital 69.

1996 See Commission Implementing Regulation (EU) 2021/983, recital 97.

1997 Commission Implementing Regulation (EU) 2020/1428 of 12 October 2020 imposing a provisional anti-dumping duty on imports of aluminium extrusions originating in the People's Republic of China, OJ L 336, 13.10.2020, recitals 107-111.

1998 Commission Implementing Regulation (EU) 2021/582 of 9 April 2021 imposing a provisional anti-dumping duty on imports of aluminium flat-rolled products originating in the People's Republic of China, OJ L 124, 12.4.2021, p. 40–115.

activities were documented included Tianjin Zhongwang Aluminium Industry, Jiangsu Alcha Group, Xiamen Xiashun and Chalco Ruimin[1999] (for further information on Party building activities, see in particular Sections 2.3.3, 3.3.1 and 3.3.2).

15.5. DISTORTIONS IN THE ALUMINIUM MARKET

As outlined in Sections 15.2 and 15.3, the Government has continuously intervened in the market by applying a broad variety of different instruments. Evidence of these interventions has been found in the trade defence investigations carried out by various jurisdictions, showing the Government's determination to strictly control and influence the Chinese aluminium sector. Concrete examples of how the Government's intervention has affected and continues to affect the Chinese aluminium sector are described below.

15.5.1. RAW MATERIALS

15.5.1.1. BAUXITE

Bauxite is the core raw material for aluminium production—producing one tonne of aluminium requires around 1.9 tonnes of bauxite. According to available statistics, in 2021, the global bauxite reserves amounted to 32 billion dry metric tons. China, with bauxite reserves estimated at between 1 billion tonnes and 5 billion tonnes[2000], had around 3% of global bauxite reserves and ranked seventh in 2021 in the world in bauxite reserves after Guinea, Vietnam, Australia, Brazil, Jamaica and Indonesia. In 2018, China's bauxite output reached 70 million tonnes while it imported 80 million tons of bauxite ore and concentrates[2001]. In 2021, China produced some 86 million metric tonnes of bauxite while it imported approximately 107 million metric tonnes[2002].

Given that China's domestic bauxite production does not meet the country's needs in terms of aluminium production, before 2011, China had in place a set of export-related measures to prevent bauxite exports, including export duties, export quotas, export performance requirements and minimum export price requirements on bauxite. The WTO Dispute Settlement Body found that these measures were inconsistent with WTO rules[2003]. While China has since removed these measures, they influenced the Chinese aluminium sector over a considerable period of time and contributed to the current configuration of this industry. China also has in place other export restrictive measures on bauxite, such as a non-automatic export licensing requirement[2004].

1999 Commission Implementing Regulation (EU) 2021/582, recital 142.

2000 See at: https://www.statista.com/statistics/264964/production-of-bauxite/ (accessed on 9 August 2023), as well as at https://pmarketresearch.com/chinas-bauxite-consumption-exceeded-150-million-tons/ (accessed on 9 August 2023).

2001 *Ibid.*

2002 See at: https://www.statista.com/statistics/1126259/china-bauxite-import-volume/ (accessed on 9 August 2023), as well as at: https://www.alcircle.com/news/top-ten-countries-with-the-highest-bauxite-production-in-2021-79380 (accessed on 9 August 2023).

2003 WT/DS398: Report of the Panel: China – Measures related to the exportation of various raw materials; 5 July 2011.

2004 OECD, *Trade in raw materials*, available at: http://www.compareyourcountry.org/trade-in-raw-materials/en/0/BAUXI/all/default (accessed on 9 August 2023).

As for bauxite imports, the main sources for Chinese imports in 2021 were Australia, Guinea and Indonesia[2005]. Since around 2010, China has also been intensively investing in bauxite mines abroad to ensure availability of this raw material for its smelters. Those investment include:

- Guinea: In 2011, China Power Investment Corp, a SASAC-managed SOE[2006], invested an estimated USD 6 billion in Guinea to develop bauxite and alumina refineries, together with a port to export those raw materials from Guinea[2007]. In 2015, SMB, a consortium that consists of Singapore's Winning Shipping and two Chinese companies (Shandong Weiqiao Group and Yantai Port Group) also launched bauxite mining activities in Guinea after their bauxite supply chain got cut by an export ban from Indonesia in 2014[2008]. In 2017, Guinea concluded a USD 20 billion bauxite barter deal with China, according to which the consortium of Chinese companies (China Henan International Cooperation Group, Chalco, SPIC) obtained bauxite mining licenses and agreements in exchange for multi-sector infrastructure, road networks, sanitation, and a university building financed by China[2009]. In 2020, China, imported an estimated 52.7 million tons of bauxite from Guinea, with 14 Chinese state-owned and private companies involved in the aluminium business in the country[2010].
- Ghana: In 2018, the Master Project Support Agreement, signed between the Ghanaian government and Chinese SOE Sinohydro Corp Limited, delivered USD 2 billion worth of infrastructure projects across the country, which Ghana would pay back by, first, allowing China access to 5% of its bauxite reserves, including by granting mining licenses to Chinese companies and a right for Sinohydro to build a refinery for bauxite production and, second, using the revenues from bauxite exports for loan repayment[2011]. In 2021, a new project in Ghana was announced, including development of an integrated bauxite-aluminium mine through a Chinese resource-backed loan. In June 2022, the government of Ghana unveiled that the Chinese government had committed an amount of USD 15

2005 China Bauxite Imports Hit Historical High in May with International Dynamics Turning More Complicated, available at: https://news.metal.com/newscontent/101868451/china-bauxite-imports-hit-historical-high-in-may-with-international-dynamics-turning-more-complicated (accessed on 9 August 2023).

2006 In 2015 it was merged with the State Nuclear Power Technology Corporation to form the SPIC.

2007 China Power Investment Aims to Spend $6 Billion on Guinea Bauxite Refinery, available at: https://news.metal.com/newscontent/100022834/china-power-investment-aims-to-spend-$6-billion-on-guinea-bauxite-refinery/ (accessed on 9 August 2023).

2008 How does 2020 bode for China's overseas investment? A Chinese lawyer's take, available at: https://chinadialogue.net/en/business/11792-how-does-2-2-bode-for-china-s-overseas-investment-a-chinese-lawyer-s-take/ (accessed on 9 August 2023).

2009 The China-Guinea $20 billion bauxite deal might be a risky loan for Guinea: NRGI, available at: https://www.alcircle.com/news/the-china-guinea-20-billion-bauxite-deal-might-be-a-risky-loan-for-guinea-nrgi-52212 (accessed on 9 August 2023).

2010 GT Exclusive: Chinese mining projects in Guinea lawful, but firms still face risks: embassy, available at: https://www.globaltimes.cn/page/202111/1238672.shtml (accessed on 9 August 2023).

2011 Benefo A. and Addaney, M. Georgetown Journal of International Affairs. Promises and Pitfalls: China's Financing of the Atewa Bauxite Mining Project in Ghana, available at: https://gjia.georgetown.edu/2021/07/11/promises-and-pitfalls-chinas-financing-of-the-atewa-bauxite-mining-project-in-ghana/ (accessed on 9 August 2023).

billion to aid developmental projects in Ghana and that China is expected to invest USD 10 billion into Ghana's bauxite industry through the deal[2012].

- Australia: Chinalco attempted to increase its share in the international mining group Rio Tinto, to get minority stakes in various mining projects, including the Australian Weipa aluminium and Yarwun Aluminium. In 2008, Chinalco joined the U.S. aluminium company Alcoa in buying about 9 % of Rio Tinto for US 14 billion. The purchase was financed by the CDB[2013] (see Chapter 6). In 2009, Chinalco planned to increase the investment to at least 14.99% by investing another USD 19.5 billion, with financing from CDB, EXIM and ABC[2014]. The deal was eventually cancelled.

15.5.1.2. COAL

Historically, aluminium plants in China were very dependent on coal-fired energy. The trend is gradually being reversed with support for clean energy sources, but large amounts of aluminium production capacity are still dependent on coal. The very low coal prices (and even the provision of coal specifically to support aluminium production) were one of the reasons a lot of aluminium smelters relocated to Xinjiang, a province with great abundance of coal. A few examples of preferential coal supply to the aluminium producers include:

- Xinfa Group decided to move to Xinjiang in 2012 because of cheap or even free coal. According to a press release concerning Xinfa's decision: "*Xinjiang's advantage lies in low coal prices. It is understood that the local government implements the policy of 'matching resources with projects', the government will allocate as much coal as the investment project needs. According to industry insiders, the price of coal is very low, and in many cases even free*". A vice-president of the Xinfa Group went on record to say that even though the Group had purchased its own coal mines in Xinjiang, it temporarily purchased coal from the market because the cost of coal was minimal[2015].
- Shenhuo decided to install new capacity in Xinjiang starting from 2010 because the local government was willing to support Shenhuo with 1 billion tonnes of coal resources[2016].

In addition to the government providing cheap coal to the aluminium enterprises, there are other examples of the government intervening to keep coal prices low. For example, in 2018, Qinhuangdao Port announced that, following NDRC's directives, coal priced at more than RMB

2012 Ghana's bauxite industry foresees $10 billion Chinese investment, available at: https://www.alcircle.com/news/ghana-s-bauxite-industry-foresees-10-billion-chinese-investment-80869 (accessed on 9 August 2023).

2013 Cimilluca, D.; Oster, S.; Or, A. - Rio Tinto Scuttles Its Deal With Chinalco, 2009, (Wall Street Journal), available at: https://www.wsj.com/articles/SB124411140142684779 (accessed on 9 August 2023).

2014 4 Banks' $21 billion loan to support Chinalco's stake in Rio Tinto, available at: http://finance.sina.com.cn/chanjing/gsnews/20090328/17336037815.shtml (accessed on 9 August 2023).

2015 Sina Finance: Xinfa Bet on Xinjiang: A Trial Examination of the Great Circulation Model, available at: http://finance.sina.com.cn/chanjing/gsnews/20120806/113012768139.shtml (accessed on 9 August 2023).

2016 Xinjiang Shenhuo Company achieves substantial profit, available at: https://www.henandaily.cn/content/zhengwu/mlsq/rdhy/2016/1130/24370.html (accessed on 9 August 2023).

750 per tonne would be denied port entry[2017]. Further governmental interventions into the price of coal are described in the Chapter 10.

15.5.1.3. PRIMARY ALUMINIUM FOR PROCESSING

In its past investigations2018, the Commission found that raw material prices in the aluminium sector are the result of various types of government intervention allowing the Chinese aluminium processing enterprises to purchase not alloyed unwrought aluminium, and alloyed unwrought aluminium, at distorted prices. These interventions comprise the numerous plans, directives and other documents pertaining to aluminium, issued at the national, regional and municipal level, which clearly show the high degree of intervention of the Chinese government in the aluminium sector. Beyond the plans, the government's intervention in the sector has taken the form, inter alia, of export-related measures, including export duties, export quotas, export performance requirements and minimum export price requirements on different raw materials for aluminium. The GOC further discourages exports of primary aluminium and its inputs, aiming at promoting higher added-value aluminium products. This objective is pursued by granting full or partial VAT rebates on downstream aluminium products in combination with incomplete VAT rebates and export taxes on primary aluminium. Other types of government intervention leading to market distortions include the stockpiling policy through the State Reserve Bureau and the role of the Shanghai Futures Exchange (SHFE). In addition, several trade defence investigations have established that the Chinese government has consistently granted different types of State support measures to aluminium producers. The extensive intervention of the GOC in the aluminium sector has led to overcapacity, which is arguably the clearest illustration of the implications of the GOC's policies and the resulting distortions2019.

15.5.2. TAXATION POLICIES

15.5.2.1. ENTERPRISE INCOME TAX

Preferential Enterprise Income Tax (*'EIT'*) is applicable to a number of enterprises in China and offers a reduced tax rate instead of the standard EIT of 25%. Enterprises in the aluminium sector can benefit from a reduced EIT rate of 15% as high-tech enterprises[2020] which covers companies active, among others, in the new materials, aviation and aerospace, and advanced manufacturing and automation. Moreover, a reduced EIT rate applies to companies making investments in encouraged industries in China's Western Regions from 1 January 2021 to 31

2017 *Jiemian:* Coal priced at more than C¥750/tonne will be denied port entry at Qinhuangdao Port; available at: https://www.jiemian.com/article/1928110.html (accessed on 9 August 2023).

2018 See: Commission Implementing Regulation (EU) 2021/983 of 17 June 2021 imposing a provisional anti-dumping duty on imports of aluminium converter foil originating in the People's Republic of China, 18.6.2021, OJ L 216, Recitals 115-120; Commission Implementing Regulation (EU) 2020/1428 of 12 October 2020 imposing a provisional anti-dumping duty on imports of aluminium extrusions originating in the People's Republic of China, 13.10.2020, OJ L 336/8, Recitals 125, 130-135; Commission Implementing Regulation (EU) 2021/582 of 9 April 2021 imposing a provisional anti-dumping duty on imports of aluminium flat-rolled products originating in the People's Republic of China, 12.4.2021, OJ L 124, Recitals 156, 161-166.

2019 *Ibid.*

2020 See Article 28 of the Law on Enterprise Income Tax (amended on 29 December 2018), available at: http://www.npc.gov.cn/npc/c30834/201901/0c846c25aa80405fafc6f99247d0fe08.shtml (accessed on 9 August 2023).

December 2030, based on the Announcement of the Ministry of Finance and the State Taxation Administration about Continuing to Implement Preferential Corporate Income Tax Policies for Western Development[2021]. The list of eligible industries includes certain aluminium businesses. To provide some examples, development and production of high-performance aluminium alloy products in the Guizhou province, as well as technology development for and production of high-performance aluminium alloy deep processing products in the Guangxi Zhuang Autonomous Region are eligible for the lower EIT rate[2022]. Local authorities may also use preferential EIT as a policy tool to promote the development of the aluminium industry. A prime example is the Notice on Several Policies for Expanding the Aluminium Deep Processing Industry in Nanning issued by Nanning Municipal People's Government in September 2022[2023], according to which qualified aluminium enterprises can enjoy an even lower EIT rate of 9%.

15.5.2.2. VAT REBATES

The Government implements VAT policies that discourage exports of primary aluminium, which results in a depression of prices of primary aluminium in the Chinese domestic market that in turn provides a significant cost advantage for Chinese producers of processed aluminium products[2024].

This policy has been confirmed by the Commission in several investigations into aluminium products from China, as well as by other investigating authorities[2025].

Moreover, a 2019 OECD study on aluminium has found:

> *Incomplete rebates of VAT for exporters are a specific tool used by China to favour exports of certain products. China's VAT policy differs from the standard destination-based VAT system of many countries in that it does not fully refund the VAT on exports. Instead, China-based exporters may be eligible for VAT rebates that range from zero to a full refund of the typical 17% VAT rate, depending on the product they export. China's system of VAT rebates can be considered a trade-policy tool since the Government often modifies rebate rates selectively, restricting exports of certain products while encouraging others. Estimated VAT costs for different aluminium products in China show exports of*

2021 Available at: https://www.waizi.org.cn/tax/84348.html (accessed on 9 August 2023).

2022 Full list (in Chinese and English) available at: http://lawinfochina.com/display.aspx?id=36809&lib=law (accessed on 9 August 2023).

2023 See Article 3 of Several Policies for Expanding the Aluminium Deep Processing Industry in Nanning, available at: https://www.nanning.gov.cn/zwgk/fdzdgknr/zcwj/zfwj/t5340212.html (accessed on 30 March 2023).

2024 Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in China, 9.11.2012; OJ L 310, p.1, para. 21.

2025 Commission Regulation (EU) No 404/2010 imposing a provisional anti-dumping duty on imports of certain aluminium wheels originating in China; 11.5.2010, OJ L 117, p.64; Commission Regulation (EU) No 833/2012 of 17 September 2012 imposing a provisional anti-dumping duty on imports of certain aluminium foils in rolls originating in China, 18.9.2012, OJ L 251, p.29; *Australia:* REP 181, p.34, REP 248, pp.77-78, REP 263, pp.81-83; *Canada*: CBSA: Statement of Reasons concerning the final determination with respect to the dumping and subsidizing of Certain Aluminium Extrusions originating in or exported from China, 3 March 2009., pp. 89-92; *USA*: Office of the United States Trade Representative (2017), National Trade Estimate Report on Foreign Trade Barriers, p. 83,

bauxite, alumina, and primary aluminium to have all borne the full extent of the VAT – and thus to have been penalised – over the past 8 to 15 years. In other words, they had zero or near-zero rebates in the period. On the contrary, exports of semis and articles of aluminium had higher VAT rebates over the same years and were thus promoted relative to upstream products[2026].

Indeed, promoting exports of higher added value aluminium products goes hand in hand with the policies to discourage exports of primary aluminium, aluminium scrap or other low added value products[2027]. To provide some examples, a full VAT rebate is in place on exports of aluminium foil[2028], on aluminium plates[2029], but not on aluminium wire[2030].

15.5.2.3. EXPORT TAXES ON UNWROUGHT ALUMINIUM

China has also had in place an export tax of 15% on alloyed unwrought aluminium (30% for non-alloyed) and aluminium scrap[2031]. It has been argued that the reason for this export tax is to shift exports towards high-added value products. Environmental concerns have also been invoked as a reason for adopting these policies[2032] although this does not seem to be convincing given the overall context, i.e., that there is no such constraint on the downstream industry.

By reducing the volume exported and increasing artificially the level of domestic supply, the domestic price of primary aluminium, which represents a key cost-driver for aluminium processed products, is kept artificially lower than would otherwise be the case in the absence of these policies.

According to OECD's 2019 Report, China's export taxes combined with the VAT rebates have important effects on world aluminium markets. According to the study: "*The combination of*

2026 OECD (2019), Measuring distortions in international markets: the aluminium value chain, p. 25.

2027 USITC. *Aluminium: Competitive conditions affecting the US industry*, pp 254-256 (2017); Zou, S. (2016) 2017 PREVIEW: *Will China's aluminium imports, exports see a repeat of the surges of 2016?* Metal Bulletin, available at: https://www.metalbulletin.com/Article/3646560/2017-PREVIEW-Will-Chinas-aluminium-imports-exports-see-a-repeat-of-the-surges-of-2016.html (accessed on 9 August 2023); Platts. (2014). *China unlikely to cut 15% export tax on primary aluminium: sources*, available at: https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/metals/120914-china-unlikely-to-cut-15-export-tax-on-primary-aluminum-sources#:~:text=Aluminum%20smelting%20is%20power%20intensive%20and%20adds%20little,and%20importing%20pollution%2C%20analyst%20and%20smelter%20sources%20said. (accessed on 9 August 2023).

2028 See at: https://www.transcustoms.com/China_HS_Code/China_Tariff.asp?HS_Code=7607112000 (accessed on 10 August 2023).

2029 See at: https://www.transcustoms.com/China_HS_Code/China_Tariff.asp?HS_Code=7606122000 (accessed on 10 August 2023).

2030 See at: https://www.transcustoms.com/China_HS_Code/China_Tariff.asp?HS_Code=7605190000 (accessed on 16 August 2023).

2031 See The Customs Tariff Commission of the State Council's 2023 Tariff Adjustment Plan, available at: a3d59cbc7ee044feb7c45c848476dad1.pdf (www.gov.cn)/ (accessed on 9 August 2023); See also: WTO. (2021). China's Trade Policy Review, p. 68-69; available at: https://www.wto.org/english/tratop_e/tpr_e/s415_e.pdf (accessed on 9 August 2023); See also the OECD database on export restrictions at: https://qdd.oecd.org/subject.aspx?Subject=ExportRestrictions_IndustrialRawMaterials (accessed on 14 March 2023). An alternative source of data is in place at: https://data-explorer.oecd.org/.

2032 CBSA: *Statement of Reasons concerning the final determination with respect to the dumping and subsidizing of Certain Aluminium Extrusions originating in or exported from China*, 3 March 2009, p.91; Platts. (2014) *China unlikely to cut 15% export tax on primary aluminium: sources*.

incomplete VAT rebates and export taxes implies a de facto export tax on primary aluminium well in excess of 15% (around 30%). This is in contrast with more processed aluminium products (e.g. semis), for which VAT costs and export taxes are generally both lower"[2033].

15.5.3. ENERGY AND ELECTRICITY

Electricity is one of the main cost drivers in aluminium production. Therefore, low electricity prices provide a significant advantage to aluminium producers and downstream users of primary aluminium. The distortions in the energy market, including in the aluminium sector, are described in detail in Chapter 10. They include in particular three problems:

- differentiated electricity prices for aluminium producers, either in the form of preferential pricing or punitive pricing, clearly singling out the enterprises active in the aluminium industry (see Section 10.2.1.2),
- distorted energy costs through the use of captive power plants (see Section 10.2.3),
- direct electricity supply benefitting certain categories of enterprises (see Section 10.2.2.2).

15.5.4. STOCKPILING POLICY

The government purchases and resells primary aluminium via the NFSRA (see Section 12.5.1), with the purpose of stabilizing the price of aluminium products and mitigating excess capacity[2034]. The following transactions were made in the recent years, in most cases having a direct impact on the market prices of aluminium:

- in March 2013, the government purchased 300 000 tonnes of aluminium in a move to support the struggling metal industry[2035],
- in 2016, there were unofficial accounts of the State Reserve Bureau planning to buy 2 million tonnes of aluminium from 14 Chinese smelters and hold the metal for at least three years in order to shore up prices[2036],
- in 2021, the NFSRA announced that it would release storage three times in June, July and August 2021, and put a total of 80 000 tons of copper, 210 000 tons of aluminium, and 130 000 tons of zinc into the market to curb the rise in non-ferrous metal prices in the hope to curb inflation[2037].

2033 OECD (2019), Measuring distortions in international markets: the aluminium value chain, p. 25.

2034 Australia Anti-Dumping Commission, *Certain Aluminium Extrusions from China*; REP 148, 15 April 2010; Commission Regulation (EU) No 404/2010 imposing a provisional anti-dumping duty on imports of certain aluminium wheels originating in China; 11.5.2010, OJ L 117, p.64; Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definiti)ve anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in China, 9.11.2012; OJ L 310, p.1, rec. 22; Commission Regulation (EU) No 833/2012 of 17 September 2012 imposing a provisional anti-dumping duty on imports of certain aluminium foils in rolls originating in China, 18.9.2012, OJ L 251, p.29, para. 37.

2035 Farchy, J. Beijing acts to stockpile aluminium. Financial Times, available at: https://www.ft.com/content/a2e98e9e-8be0-11e2-b001-00144feabdc0 (accessed on 24 October 2022).

2036 Djukanovic, B., A way of optimism lifts metal prices. Aluminium Insider, available at: https://aluminiuminsider.com/a-way-of-optimism-lifts-metal-prices/ (accessed on 10 August2023).

2037 The uncertainty of external factors has increased, and it is time to build commodity reserves, available at: https://new.qq.com/rain/a/20210907A0C5BN00 (accessed on 10 August 2023).

In addition to these purchases, there are indications that the CNIA proposed that the NDRC purchase 900 000 tonnes of aluminium in late 2015[2038]. Some reports also suggested the involvement of various SOEs and provincial governments in stockpiling practices in 2016 and in 2020[2039]. However, due to lack of transparency, those purchases could not be verified, as there is no evidence of the state actually carrying the two purchases through. Note that China does not publish the date, the prices or the quantities of aluminium it has stockpiled. Hence the above list is likely to be incomplete.

15.5.5. SHFE

Several EU investigations have analysed the role of SHFE (see Section 12.6) and its influence on the domestic market for aluminium. In anti-dumping investigations, the Commission consistently concluded that the Government interferes with the price setting mechanisms in the SHFE, and thus creates a distortion in the primary aluminium and downstream markets by depressing prices [2040]. In the same vein, the Australian anti-dumping investigating authority has determined that the aluminium prices paid in the SHFE did not "*reasonably reflect competitive market costs*" and that, aluminium being a globally traded commodity product, the nature and correlation of prices identified between the SFHE and the LME "*was not consistent with the forces of supply and demand*"[2041].

Going beyond the price formation mechanisms, it should be noted that Article 6 of SHFE's Articles of Association stipulates "*that the Exchange shall establish an organization of the Communist Party of China* [...] *and provide necessary conditions for the activities of the party organization to ensure that the party committee plays the core role of political leadership* [...]"[2042]. This language mirrors similar provisions in the corresponding documents of corporate entities and industry associations (see Sections 2.3.3, 3.3.1 and 3.3.2), confirming the observations concerning the growing intervention of the CCP in all aspects of the Chinese economy in recent years, as described in Chapter 3.

2038 CNStock. (2015); available at: http://news.cnstock.com/industry,rdjj-201511-3634843.htm (accessed 10 August 2023).

2039 See Home, A. - China's aluminium stockpiling plan is repeating the mistakes of the past; (2015) Reuters; available at: https://www.reuters.com/article/us-china-aluminium-ahome-idUSKBN0U410220151221 (accessed on 10 August 2023); see further Yam, P.; Stanway, D. - Aluminium stockpiling fund gives glimpse of China metals reforms; (2016) Reuters; available at: https://www.reuters.com/article/china-metals-stockpiling-idUKL3N1542ZV (accessed on 10 August 2023); see also Nguyen M. - China aluminium dances to its own beat as LME price stumbles; (2020) Reuters; available at: https://www.reuters.com/article/us-china-metals-aluminium-idUSKBN22I20K (accessed on 10 August 2023).

2040 Commission Regulation (EU) No 833/2012 of 17 September 2012 imposing a provisional anti-dumping duty on imports of certain aluminium foils in rolls originating in the People's Republic of China, OJ L 251, 18.9.2012, p.29; Council Implementing Regulation (EU) No 1039/2012 of 29 October 2012 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of aluminium radiators originating in the People's Republic of China, OJ L 310, 9.11.2012, p.1; Commission Regulation (EU) No 404/2010 of 10 May 2010 imposing a provisional anti-dumping duty on imports of certain aluminium wheels originating in the People's Republic of China; OJ L 117, 11.5.2010, p. 64; Commission Implementing Regulation (EU) 2021/983, recital 118.

2041 Australian Customs and Border Protection Service: *Certain aluminium extrusions exported to Australia from the People's Republic of China*, REP 148; 15.4.2010, p. 35.

2042 See at: https://www.shfe.com.cn/regulation/regulation/rules/ (accessed on 10 August 2023).

15.5.6. USE OF FORCED LABOUR IN ALUMINIUM PRODUCTION

A significant proportion - around 10% - of China's aluminium industry is located in Xinjiang, which is attractive for investors in terms of the abundance of cheap coal (see Section 15.5.1.2). However, there are indications of the use of forced labour in all of the eight main aluminium smelters located in the province, as established for instance by the 2022 report by Horizon Advisory. The investigated forced labour indicators included, among others, transfer of labour, ties to the Xinjiang Production and Construction Corps, presence of "*ethnic policy*" leaders, job fairs and vocational education explicitly tied to transfer of labour and coordination of labour transfer subprogramme[2043] (see Chapter 13 for further details).

15.6. PAST FINDINGS ON GOVERNMENT SUPPORT IN THE ALUMINIUM SECTOR

It is not possible to provide a concise overall picture of the cumulated financial and non-financial support measures from which the Chinese aluminium industry benefits. However, it is clear that the level of support is very substantial. According to the 2019 OECD study, while some sort of subsidisation of the aluminium industry is also present in other jurisdictions, what differentiates China from other jurisdictions is the fact that, first, the subsidies in China mostly take the form of financial subsidies and some energy and input subsidies, as opposed to mostly non-financial support in other jurisdictions, and secondly, the scale of those subsidies is much larger than elsewhere[2044]. The OECD study reported that Chinese firms received State support in the form of below market-value loans ranging from 4% to 7% of annual revenues (data covering years 2008-2019) as compared to similar loans representing 0.2% of annual revenues of companies located in other countries[2045]. This corresponds to a 35-fold higher subsidisation in the form of loans in China as compared to other jurisdictions.

The main beneficiaries of China's financial support for the aluminium industry were the Chinese aluminium SOEs. However, as evidenced in the aforementioned OECD study, two large private firms also benefitted from support from state-owned banks: the China Hongqiao Group and China Zhongwang, China's largest producer of extrusion products[2046].

In terms of non-financial government support (for example R&D or energy subsidies), the OECD study examined 17 companies in various jurisdictions and found that the largest beneficiary was the China Hongqiao Group, benefitting from roughly 30% of all non-financial support considered by the study. Two other Chinese enterprises also ranked among the top five recipients of non-financial government support in the study, including SPIC (15%) and Qinghai Provincial Investment Group ('*QPIG*') (6%). It seems that the support measures were mostly focused on primary aluminium producers, while the three investigated producers of semis - China Zhongwang, Xingfa Aluminium and Henan Mingtai - received comparatively lower support[2047].

2043 Horizon Advisory. Base Problem: Forced labour risks in China's aluminium sector. April 2022, available at: https://www.horizonadvisory.org/backtobasics (accessed on 16 August 2023).

2044 OECD (2019), Measuring distortions in international markets: the aluminium value chain, p.6.

2045 *Ibid.*, p. 50

2046 *Ibid.*, p. 6.

2047 *Ibid.*, p. 13-14.

The study further identified cheap loans with "*interest rate below benchmark*", for example in the case of the state-owned SPIC and QPIG[2048], noting that the financing institutions included largely state-owned commercial banks and policy banks (see Section 6.3). Moreover, certain SOEs in China seemed not to be subject to the same market discipline as other firms in the industry; for example, Chalco, QPIG, and Yunnan Aluminium obtained average returns on equity that were far lower than the industry benchmark[2049]. The study furthermore pointed out that while some part of financing in China came from shadow banking (see Section 6.3.1.5), loans arising therefrom - which could be a subsidy equivalent - were difficult to identify in a systematic manner due to the lack of transparency, and they therefore could not be quantified.

Past Commission anti-dumping investigations confirmed that a number of aluminium producers received important governmental subsidies, including the producers of aluminium extrusions[2050]. Moreover, the Commission ACF anti-subsidy investigation[2051] established the following list of subsidies which benefitted the industry:

Preferential financing[2052]

- Preferential loans;
- Free credit lines;
- Acceptance drafts: investigated companies benefitted from financing in the form of bank acceptance drafts for which they did not bear any cost;
- Banks investing into convertible bonds at very low rates of return, then converting them into shares at a price much higher than their market value;
- Preferential financing in the form of corporate bonds;
- Export credit insurance at rates below the minimum fee needed for the lending bank – Sinosure – to cover its operational costs;
- Grants related to technology, innovation and development with eligibility criteria depending on national industrial policy goals;
- Grants, including asset-related grants, patent funds, science and technology funds and awards, business development funds, export promotion funds, grants for industry quality increase and efficiency enhancement, municipal commerce support funds, foreign economic and trade development funds and production safety awards.

Revenue foregone through tax exemptions and reduction programmes[2053]

- Direct tax exemptions and reductions (reduced EIT rate of 15%);
- EIT offset for research and development expenses;
- Dividends exemption between qualified resident enterprises (income tax preferences to enterprises engaged in industries or projects the development of which is specifically supported and encouraged by the State, in particular tax discounts/exemptions from

2048 *Ibid.*, p. 21.
2049 *Ibid.*, p. 24.
2050 Commission Implementing Regulation (EU) 2020/1428, recitals 102-103.
2051 Commission Implementing Regulation (EU) 2021/2287.
2052 *Ibid.*, Sections 3.4. to 3.7.
2053 *Ibid.*, Section 3.8.

income and equity investment tax, such as dividends and bonuses, between eligible resident enterprises);

- Land use tax exemption;
- Indirect tax and tariff exemption programmes: VAT exemptions and import tariff rebates for the use of imported equipment and technology.

Government provision of goods and services for less than adequate remuneration[2054]

- Provision of land for less than adequate remuneration (for example LUR obtained through allocation by local authorities and not through a bidding procedure; bidding procedures with only one bidder; refunds of LUR fees);
- Provision of electricity at reduced rates (reductions or refunds/adjustments of part of electricity cost; direct purchasing agreements at prices lower than official provincial electricity prices for large industrial users).

Investigations into the Chinese aluminium industry conducted by other jurisdictions also confirmed the existence of subsidies in the sector. For example, the Canadian authorities established in 2009 that Chinese producers of certain aluminium extrusions had benefitted from numerous subsidies[2055]. Following a review investigation, the Canadian authorities continued the measures as recently as 2020[2056]. Similarly, the Australian authorities established in 2010 that Chinese producers of aluminium extrusions had received various subsidies[2057]. This finding has been subject to partial reviews throughout the years and was confirmed consistently, most recently in August 2023[2058]. Moreover, the US authorities concluded in 2018 that Chinese aluminium foil producers had benefitted from a wide range of subsidies[2059]. The US authorities have also countervailed support measures available to Chinese producers of aluminium wire and cables[2060]. In addition, a report by the United States International Trade Commission referring to US investigations and market intelligence indicates that subsidies, such as provision of inputs at LTAR, have been provided by SOEs in the aluminium sector[2061].

15.7. CHAPTER SUMMARY

China is the largest aluminium producer in the world. Its domestic market is served significantly by large SOEs, which account for a dominant share of Chinese aluminium production and production capacity. These SOEs are a primary vehicle for implementing government policies

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2054 *Ibid.*, Section 3.9.

2055 See Section 15.4. of the 2017 version of this Report.

2056 See at: https://trade-remedies.wto.org/en/countervailing/investigations/measures/can-cv124cn and https://www.cbsa-asfc.gc.ca/sima-lmsi/er-rre/ae2019/ae2019-de-eng.html (accessed on 10 August 2023).

2057 See Section 15.4. of the 2017 version of this Report.

2058 See at: https://www.industry.gov.au/sites/default/files/adc/public-record/2023-09/609_-_041_-_report_-_final_report_-_rep_609.pdf (accessed on 12 October 2023).

2059 See Section 15.4. of the 2017 version of this Report, as well as the final affirmative determinations by the US authorities, available at: https://www.federalregister.gov/documents/2018/04/19/2018-08116/certain-aluminum-foil-from-the-peoples-republic-of-china-amended-final-affirmative-countervailing (accessed on 10 August 2023).

2060 See at: https://www.govinfo.gov/content/pkg/FR-2019-10-30/pdf/2019-23611.pdf (accessed on 10 August 2023).

2061 USITC. *Aluminium: Competitive conditions affecting the US industry*, p. 262-263; available at: https://www.usitc.gov/publications/332/pub4703.pdf (accessed on 10 August 2023).

(see Section 15.4.1). There are numerous plans, directives and other documents pertaining to aluminium, issued at the national, regional and municipal level, clearly showing the high degree of intervention of the Chinese government in the aluminium sector. Through these and other instruments, the Government directs and controls the development and functioning of the sector to a great extent (see Section 15.3).

Beyond the plans, the Government's intervention in the sector has taken the form, inter alia, of export-related measures, including VAT rebate policies and export taxes on aluminium products (e.g. primary aluminium and scrap). Moreover, key inputs such as energy and electricity are found to be influenced by different types of government intervention. Other types of government intervention leading to market distortions include the stockpiling policy through the NFSRA and the role of the SHFE (see Sections 15.5.4 and 15.5.5). In addition, several trade defence investigations have established that the Government has consistently granted different types of State support measures to aluminium producers (Section 15.6).

The extensive intervention of the government in the aluminium sector has also led to overcapacity (see Section 15.2.3). While the Chinese authorities have taken various formal measures aimed at curbing overcapacity, the issue of structural overcapacity has not been resolved as of writing of this Report.

16. CHEMICAL INDUSTRY SECTOR

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16.1. INTRODUCTION

This chapter focuses on the Chinese chemical sector, covering a broad range of chemicals, falling into the general categories of basic chemicals (for example, inorganic chemicals, petrochemicals and fertilisers), speciality chemicals[2062] (for example, dyes, paints, pesticides, additives, electronic chemicals), polymers (for example, plastics, man-made fibres, synthetic rubber), consumer chemicals (for example, detergents, cosmetics, fragrances), as well as new chemical materials (for example, advanced composites). Expressed in terms of the Harmonised System ('*HS*') nomenclature,[2063] this chapter broadly covers Section VI of the HS, except

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2062 Another overlapping category referred to in various regulatory documents is Fine chemical, comprising products such as amino-acids, flavors and fragrances, vitamins, D-ethyl esters, hydroxymethoxyethylbenzene, biphenylnitrile, phthalate diallyl ester, butylsulfonyl chloride, p-toluenesulfonyl chloride, trimethyliodosilane, potassium iodide, potassium iodate, anti-corrosion coatings including nano marine anti-corrosion and graphene marine anti-corrosion coatings, dispersed polyacrylamide, dispersed polyacrylic acid copolymer, maleic acid copolymer, scale inhibition corrosion inhibitor, polycarboxylic acid scale inhibitor dispersant, quaternary ammonium salt sterilization and algae killing agents, other water treatment aids.

2063 See at: https://www.wcotradetools.org/en/harmonized-system (accessed on 22 August 2023).

pharmaceutical products but parts of Section V, in particular Chapter 27, certain parts of Section XI and others.

The Chapter will first provide a general overview of the Chinese chemical sector, including a summary of recent data on production, geographical distribution, main market players, etc. Subsequently, the Chapter will describe the relevant legal and administrative framework, in particular the planning documents for the chemical sector, at various levels of government. Finally, the Chapter will further recount the distortions detected in the Chinese chemical sector by the Commission and the US authorities.

16.2. THE CHINESE CHEMICALS MARKET

16.2.1. CHINA'S GLOBAL POSITION

As of the writing of this Report, China ranks first among the countries producing chemicals. In 2020, China's sales of chemicals totalled EUR 1 547 billion, thereby representing 44.6% of global chemical sales. China was followed by the EU with 14.4% and the US with 12.3% of global sales, respectively[2064]. This reflects a long-term trend of China's growing share of global chemicals sales (amounting to 25.8% a decade earlier), with the share of other players decreasing correspondingly (in the case of the EU from 19.3% in 2010 and in the case of the US from 16.5% in 2010)[2065]. Even when set into the context of a continuously growing global market in chemicals (+6.1% in 2021), the chemical production was growing fastest in China with 7.7% growth in 2021 (6.0% in the EU and 1.8% in the US, respectively)[2066].

In its trade with the rest of the world, China has become a net exporter of chemicals, although it is close to a balanced trade position. In 2021, China exported USD 214 billion (USD 137 billion in 2020, USD 130 billion in 2019, USD 137 billion in 2018, USD 114 billion in 2017, USD 141 billion in 2016) and imported USD 190 billion (USD 150 billion in 2020, USD 155 billion in 2019, USD 156 billion in 2018, 133 billion in 2017, USD 152 billion in 2016) worth of chemicals[2067].

16.2.2. MAIN INDUSTRY SEGMENTS

According to Chinese official statistics, manufacturing of raw chemical materials and chemical products represented the largest subsector in 2020, with more than 22 000 enterprises employing 3 400 000, and with revenue of approximately RMB 6 400 billion (approximately USD 980 billion). The second largest subsector was manufacturing of rubber and plastic products, with approximately 20 781 enterprises generating RBM 2 558 billion in revenue (approximately USD 391 billion) and employing 2 800 000. The processing of petroleum, coal and other fuels was the third largest sector, with 2 116 enterprises, RMB 4 198 billion in revenue

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2064 See at: https://cefic.org/a-pillar-of-the-european-economy/facts-and-figures-of-the-european-chemical-industry/profile/#h-eu27-market-share-dropped-significantly (accessed on 29 August 2022).

2065 *Ibid.*

2066 See at: https://report.basf.com/2021/en/managements-report/basf-group-business-year/economic-environment/chemical-industry.html (accessed on 22 August 2023).

2067 See China Statistical Yearbook 2022, Section 11-4, available at: www.stats.gov.cn/sj/ndsj/2022/indexeh.htm (accessed on 22 August 2023). See the corresponding Section 11-4 also in the previous annual editions of the China Statistical Yearbook.

(approximately USD 643 billion), and employment of 804 000 followed by the manufacturing of chemical fibres with 1 937 enterprises, RMB 800 billion in revenue (approximately USD 123 billion), and employment of 422 000[2068].

On a more granular basis, the China Petroleum and Chemical Industry 2020 Economic Operations report[2069] noted a rapid growth in the overall production of key chemicals, combined with a slight decline in the production of agrochemicals as follows:

Product	Output (million tons)	YoY change (%)
Key Chemicals		
Ethylene	21.6	+5.2
Benzene	10.42	+8.6
Methanol	49.84	+4.7
Paints	25.49	+2.6
Chemical reagents	28.24	+4.5
Sulfuric acid	92.38	-1.3
Caustic soda	36.74	+6.2
Soda ash	28.12	-2.9
Synthetic resin	104	+7.0
Polymers	74.19	+8.2
Tires	818	+1.7
Agrochemicals		
Nitrogen fertilizers	36.79	+2.7
Phosphate fertilizers	10.05	-6.9
Potash fertilizers	7.11	-7
Raw pesticide agents	2.15	-1.1

The corresponding 2021 report[2070] observes a continued overall growth trend: "*in terms of main categories* [...] *the total quantity of basic chemicals increased by about 6.7%. The output of ethylene was 28.257 million tons, up 30.8% compared to the previous year; the output of chemical fertilizers remained basically the same with an aggregate output (converted into pure substances) was 55.436 million tons, up 0.9%, after last year's decrease by 4.1%; raw materials for phyto-sanitary products increased by 7.8%; tire casings increased by 10.8%.*"

16.2.3. GEOGRAPHICAL DISTRIBUTION OF THE CHEMICAL INDUSTRY

Chinese chemical plants are found predominantly in the Central and Eastern provinces, with the main production areas and their production focus distributed as follows[2071]:

2068 See China Statistical Yearbook 2021, Section 13-2.

2069 See at: http://lwzb.stats.gov.cn/pub/lwzb/tzgg/202107/W020210723348607291201.pdf (accessed on 5 July 2023).

2070 Available at: http://lwzb.stats.gov.cn/pub/lwzb/tzgg/202205/W020220511400435319593.pdf (accessed on 22 August 2023).

2071 See at: https://baijiahao.baidu.com/s?id=1740107774960498729&wfr=spider&for=pc (accessed on 22 August 2023).

Province / Location	Manufacturing focus
Shandong	petrochemicals, basic chemical raw materials, fluorine chemicals, titanium dioxide, pesticides, plastics, silicones and other fine chemicals
Jiangsu	petrochemicals, basic chemical raw materials, fluorine chemicals, pesticides, dyes, plastics, titanium dioxide, silicones and other fine chemicals
Zhejiang	petrochemicals, basic chemical raw materials, fluorine chemicals, pesticides, dyes, plastics, titanium dioxide, silicones and other fine chemicals
Hebei	pesticides, plastics, petrochemicals and silicones
Sichuan	pesticides, titanium dioxide and basic chemical raw materials
Guangdong	plasticizers, petrochemicals, fluorine chemicals
Tianjin	petrochemicals
Henan	dyes, pesticides, silicones
Liaoning	petrochemicals
Hubei	titanium dioxide, petrochemicals and basic chemical raw materials

As will be described below in Section 16.3, Chinese authorities encourage the creation of industrial clusters in the chemical sectors, not least to take advantage of the interdependencies of various chemical manufacturing processes and to reap the benefits of economies of scale. By 2018, China had 676 chemical industrial parks, of which 351 were provincial-level industrial parks and 224 were prefectural-level industrial parks. They are mainly distributed in the provinces of Jiangsu, Shandong and Hubei (see also Table 16.1 below listing China's top ten chemical parks in 2021), each of them featuring specific characteristics conducive to the development of the chemical industry, such as the existence of oilfields for the petrochemical subsector, convenient transportation options along the shoreline of major rivers, or integration of the chemical industry into other industrial production chains[2072].

Table 16.1: Top 10 Chemical Parks in China (2021)[2073]

Chemical Park	**Location**
Shanghai Chemical Industry Park (SCIP)	Shanghai
Daya Bay Economic-Technological Development Area	Huizhou, Guangdong
Nanjing Jiangbei New Materials Science and Technology Park	Nanjing, Jiangsu

2072 See Chen C., Reniers, G. (2020). Chemical industry in China: The current status, safety problems, and pathways for future sustainable development; Safety Science (Volume 128, August 2020).

2073 See at: https://www.sohu.com/a/470474460_121118717 (accessed on 22 August 2023).

Ningbo Petrochemical Economic-Technological Development Area	Ningbo, Zhejiang
Ningbo Daxie Chemical Industry Park	Ningbo, Zhejiang
Taixing Economic Development Area	Taixing, Jiangsu
Yangzi River Int'l Chemical Industry Park	Zhangjiagang, Jiangsu
Qilu Chemical Industry Park	Zibo, Shandong
Dongying Harbor Economic Development Area	Dongying, Shandong
Ningdong Energy and Chemical Industry Base	Ningxia Hui Autonomous Region
China Chemical New Material (Jiaxing) Park	Jiaxing, Zhejiang
Yangzhou Chemical Industry Park	Yangzhou, Jiangsu

At the same time, with the combined output of chemical plants in Shandong, Jiangsu, Henan and Hebei exceeding 50% of China's overall chemical production, the State's push for enforcement of new, stricter (local) environmental regulations is likely to result in greater geographical concentration and corporate restructuring of the sector within the country[2074]. The impact of such redistribution on the number of actors in the sector may not be straightforward, typically when closure of smaller, outdated production sites can lead to a lower number of companies in an area, whereas the changes in industrial output do not necessarily show the same trend, for instance due to parallel increase of production in larger industrial facilities[2075]. In any event, the State is using environmental regulations as industrial policy to help achieve its industrial policy goals, such as creating industrial clusters, promoting economies of scale etc. (see Section 16.3.1).

16.2.4. STATE-OWNED ENTERPRISES

SOEs, in particular large central ones, have traditionally played a dominant role in China's petrochemical industry due to their oligopoly position in upstream/feedstock, easy access to government-allocated resources (funds, loans, land, etc.) and strong influence in government decision-making[2076]. However, the important role of SOEs extends to the entire chemical sector, with SOEs accounting for almost a quarter of total assets[2077] and for more than 40% of the total market value of listed chemical companies in 2021[2078]. Indeed, it has been reported that where central SOEs oftentimes continue to comply with its mandate to provide reliable supply of basic chemicals, as well as stable employment, some of the provincial level SOEs have recently

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2074 See Hong, S., Yifan, J., Xiaosong, L., Liu, N. (2019). *China's chemical industry: New strategies for a new era*; available at: https://www.mckinsey.com/industries/chemicals/our-insights/chinas-chemical-industry-new-strategies-for-a-new-era (accessed on 22 August 2023).

2075 *Ibid.*

2076 AT Kearney (2012). *China's Chemical Industry: Flying Blind?*, available at : https://www.kearney.com/documents/291362523/291364877/Chinas-Chemical-Industry---Flying-Blind.pdf/a3bb9398-fb58-1096-46c1-d518e0b19665?t=1687792095000 (accessed on 5 July 2023).

2077 See China Statistical Yearbook 2021, Sections 13-2 and 13-4.

2078 See Everbright Securities (2021). *Dynamic report on state-owned listed companies in the chemical industry*, available at: https://pdf.dfcfw.com/pdf/H3_AP202105141491681949_1.pdf (accessed on 5 July 2023).

pursued fresh business strategies, such as consolidating major sectors of the chemical industry[2079].

Table 16.2 below presents the top ten chemical companies in China. The three largest chemical companies (by sales revenue) in China in 2021 were central SOEs, with another two local SOEs appearing lower on the list.

Table 16.2: The 10 largest Chinese chemical companies[2080]

No.	Company name	Ownership	Estimated sales (USD bln)
1.	Sinochem Holding	SOE	144
2.	Sinopec	SOE	61.3
3.	PetroChina	SOE	22
4.	Hengli Petrochemical Co.	Private	15
5.	Rongsheng Petrochemical Co.	Private	13.4
6.	Hengyi Petrochemical Co.	Private	11.5
7.	Syngenta	SOE[2081]	10.5
8.	Wanhua Chemical Group Co.	Private[2082]	9.8
9.	Yunnan Yuntianhua	SOE	8.3
10.	Tongkun Group Co.	Private	7.7

Following a merger between Sinochem Group Co., Ltd. and ChemChina in 2021 (see also Section 5.5.1.), Sinochem Holding Co., Ltd. features as the top-level entity in the corporate structure of the reorganized group. While the Sinochem group, already before the merger a prime example of a large-scale diversified enterprise, maintains a vast range of activities well beyond chemicals, in the chemical sector its operations now cover products ranging from petrochemicals, fertilizers and pesticides, rubber tires and rubber additives, and fluorosilicons to engineering plastics and others[2083]. With revenues of USD 172 billion in 2021, the reorganized group ranked as number 31 on the Fortune Global 500, being China's ninth largest company by revenue[2084].

2079 See Hong, S.; Yifan, J.; Xiaosong, L.; Liu, N., cited.

2080 See at: https://www.process-worldwide.com/the-top-10-chemical-companies-in-china-a-1028433/ (accessed on 22 August 2023).

2081 Syngenta was founded in 2000 by the merger of the agrochemical businesses of Novartis and AstraZeneca and was acquired by China National Chemical Corporation in 2017.

2082 With a 22% shareholding by the local government.

2083 See Everbright Securities (2021). Dynamic report on state-owned listed companies in the chemical industry; See further: KPMG (2013). China's chemical industry: The emergence of local champions, available at: https://assets.kpmg.com/content/dam/kpmg/pdf/2013/10/China-Chemical-Industry-201310.pdf (accessed on 5 July 2023).

2084 See at: https://fortune.com/company/sinochem-holdings/global500/ (accessed on 22 August 2023).

16.2.5. OVERCAPACITY

For many years overcapacity has been particularly pronounced in the Chinese chemical sector[2085]. The official capacity utilisation rate statistics reported a rate of 77.2%, in the last quarter of 2020[2086] aggregated at the level of chemical raw materials and chemical products manufacturing. For the second quarter of 2022, the same statistics reported a capacity utilisation rate of 77.7%[2087]. These figures would suggest that China has made some progress in its goals of capacity reduction (see Section 16.3.1 below), even though Covid-related economic factors may have also had impact on available capacity and its utilisation. At the same time, the Government has been open since many years about the fact that even if, seen from the cyclical perspective, the country may be in the stage of capacity contraction, China's overcapacity is of a long-term nature, with the overcapacity concentrated in traditional heavy industries, such as iron, steel, coal, cement and chemicals[2088].

16.3. REGULATORY FRAMEWORK

16.3.1. 14TH FYPS RELEVANT TO THE CHEMICAL INDUSTRY

The recent developments of the chemical sector in China have been characterized by a strong regulatory drive-in pursuit of a number of policy objectives, two of which are particularly consequential, even if not entirely new[2089]:

- industry upgrading, both in terms of upgrading technical capabilities, as well as moving towards more specialty products,
- tightening of environmental requirements.

These higher-level objectives are supported by related policy measures, such as relocating chemical production sites or making available financing for chemical projects[2090].

The policy goals for the chemical sector are listed in relevant regulatory and planning documents, including the 14th FYP (see Section 4.2.5). Article VIII of the 14th FYP, titled '*Deepen the implementation of the manufacturing powerhouse strategy*', consists of four sections, among which Section 3 '*Promote the optimization and upgrading of the manufacturing industry*' states:

> [...] *We shall transform and upgrade traditional industries, promote the optimization and structural adjustment of raw material industries such as petrochemicals, steel, nonferrous metals, and building materials, expand the supply of high-quality products in sectors such as light industry and textiles, speed up the transformation and upgrading of enterprises in key industries such as the chemical*

2085 See Section 16.2.6. of the 2017 version of this Report.

2086 See at: www.gov.cn/xinwen/2021-01/18/content_5580654.htm (accessed on 22 August 2023).

2087 See at: https://m.yicai.com/news/101402248.html (accessed on 22 August 2023).

2088 See Ministry of Economic Forecasting (2018). Analysis of the reasons for the rise in the price of industrial products in the case of overcapacity, available at: http://www.sic.gov.cn/News/455/8807.htm (accessed on 22 August 2023).

2089 They featured already in the policies during the 13th planning cycle and formed part of dedicated cross-cutting industrial strategies, such as Made in China 2025, with the explicit focus on technological upgrading.

2090 See Hong, S.; Yifan, J.; Xiaosong, L.; Liu, N., cited.

industry and papermaking, and improve the green manufacturing system. We shall deepen the implementation of special projects to enhance the core competitiveness and technological transformation of the manufacturing industry, encourage enterprises to apply advanced and applicable technologies, and strengthen equipment updating and the large-scale application of new products. [...]

In other words, the Government undertakes not only the explicit commitment to strive for the optimization and structural adjustment of selected industrial (sub)sectors as such, but it is also intent on accelerating the transformation and upgrading of individual enterprises.

With respect to the environmental objectives, Article XXVIII '*Continue to improve environmental quality*' stipulates in its Section 3 '*Strictly prevent and control environmental risk*':

> [...] *We shall improve the environmental risk management system for toxic and hazardous chemical substances and complete the relocation and transformation of hazardous chemical production enterprises in key areas.* [...]

Similarly, according to Section 3 '*Vigorously develop the green economy*' of Article XXXIX '*Accelerate the green transformation of the development model*':

> [...] *We shall promote the clean and efficient use of fossil fuels such as coal, promote the green transformation of steel, petrochemical, building materials, and other industries* [...].

This is complemented by the following pledge[2091]:

> *We shall* [...] *carry out governance and transformation for volatile organic compounds in key industries such as petrochemicals, chemicals, coatings, medicine, and packaging and printing* [...].

Although the above 14th FYP objectives seem unobjectionable, they cannot be read out of the context of the 14th FYP, i.e. a document which specifically confers unconditional leadership over the country and its economy to the CCP (see Sections 3.2 and 4.2.5 for details). Equally importantly, while goals in the 14th FYP may be worded rather generally and resemble the political commitments commonly taken by governments in other countries, the regulatory documents implementing the 14th FYP demonstrate a continuity in China of an economic model in which the State, rather than setting the regulatory limits within which market forces are at play, expressly instructs and create incentives for regulators, policymakers and governments at all levels to develop and implement industrial policies in order to achieve the goals laid out in the planning documents.

In that respect, the planning documents one level below the national 14th FYP reveal the constitutive role which the State intends to play in shaping the chemical sector in China during the 14th FYP period. The 14th FYP on Developing the Raw Materials Industry (see also Section 12.2.1.1) defines the raw materials industry as consisting of the petrochemical, chemical, steel, non-ferrous metals, building materials and other sectors it describes as the bedrock of the real

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2091 Table 15 of the 14th FYP.

economy[2092]. After recounting the achievements of the 13th FYP period and the general principles of development, the plan lists the main objectives for the entire raw material industry, such as bolstering high-end supply, increasing the industry concentration and pursuing the green development and digital transformation (see Chapter 12). Moreover, when setting out how these objectives should be achieved, the Plan contains measures specifically targeting the chemical sector. In particular, with respect to technological innovation, the Plan stipulates[2093]:

> *Foster technologies such as highly selective catalysts, highly efficient membrane separation, as well as essential safety features of hazardous processes, and foster R&D of new products such as special-purpose metallocene-based polyolefin, high-end lubricants, high-purity/ultra-high-purity chemicals, special-purpose industrial gas, methane coupling based olefins. Promote engineering technologies such as the clean and efficient use of coal, short processes for coal-based chemicals production, the organization of the whole industrial chain for bio-based materials, the low-cost, harmless treatment and use of phosphogypsum, and carbon dioxide capture and storage (CCS) and comprehensive use.*

And concerning the industrial structure[2094]:

> *Production capacity increase in urea, ammonium phosphate, calcium carbide, caustic soda and yellow phosphorus sectors shall be strictly controlled. New projects shall follow the principle of replacing the same amount of existing production capacity or replacing more production capacity.* [...]
>
> *The layout plan for the petrochemical industry shall be implemented and new p-xylene and ethylene projects other than those laid down in the plan shall be strictly prohibited. The production layout of hazardous chemicals shall be improved. It is not allowed to initiate new projects or expand existing projects that produce hazardous chemicals outside chemical industrial parks. The external safety distance of projects that produce hazardous chemicals shall meet relevant requirements. We shall go ahead with the relocation and transformation of chemical enterprises located in key drainage areas and move them into qualified chemical industrial parks.* [...]
>
> *Requirements for the accreditation of chemical industrial park shall be formulated to guide localities to accredit a group of chemical industrial parks and guide the agglomeration and standardized development of chemical enterprises.* [...]
>
> *Measures shall be taken to make leading enterprises bigger and stronger. Led by the market and supported by the government, we shall* [...] *help such enterprises accelerate trans-regional and cross-ownership mergers and reorganization, so as to make the industry more concentrated and facilitate international operations. In sectors including petrochemicals and chemicals* [...] *we shall foster a number of pioneering enterprises that could lead the ecosystem of the industrial chain with core competitiveness* [...]. *The guiding role of leading enterprises in chemical and*

2092 See 14th FYP on Developing the Raw Materials Industry, Introduction and Sections I and II.

2093 *Ibid.*, Feature 1.

2094 *Ibid.*, Sections IV.I.; IV.II.; IV.III.

building materials sectors shall be leveraged to promote corporate reform and restructuring.

Moreover, the Plan contains a dedicated section on implementation, according to which[2095]:

All localities shall strengthen their compliance with this Plan and include the main contents and major projects herein in their primary local tasks. Petrochemical and chemical, steel and other key sectors shall formulate specific implementation opinions based on the objectives and tasks of this Plan and the actual conditions in the aforesaid sectors. Measures shall be taken to establish mid-term assessment mechanisms to follow through the implementation of the Plan as well as keep an eye on the new problems and situations arising out of the process in a dynamic manner, and, where necessary, adjust the contents of the Plan in accordance with relevant procedures. Sectoral organizations shall give full play to their role as a bridge between enterprises and the government through providing timely feedback on problems and suggestions on the implementation of the Plan.

The Plan therefore represents a classic example of how the overall planning system, as described in Chapter 4, functions, namely that each lower-level planning document reflects the objectives set by the higher-level plans and articulates them in a more specific manner, adding more detailed industrial policy goals. At the same time, the lower-level administrative entities are required to incorporate the Plan's objectives into their own, including establishing mechanisms to assess the implementation.

The following examples of planning documents show how the higher-level planning objectives eventually trickle down the administrative system, resulting in the government authorities setting detailed parameters of the industry, like production and capacity targets, product selection, R&D expenditure, plant location, etc.

In March 2022, six ministries[2096] issued the Guiding Opinion on Promoting the High-quality Development of the Petrochemical and Chemical Industry During the 14th Five Years Plan Period ('*the Guiding Opinion*')[2097]. According to the text, the Guiding Opinion was "*formulated in order to implement the* [14th FYP]*, implement the 14th Five Years Plan for the Development of Raw Material Industry, and promote the high-quality development of the petrochemical and chemical industry*" and it emphasizes the need to "[...] *accelerate the transformation and upgrading of traditional industries, and vigorously develop new chemical materials and fine chemicals. Accelerate the digital transformation of the industry* [...] *and promote China's progress from a large petrochemical and chemical country to a strong petrochemical and chemical country*"[2098].

2095 *Ibid.*, Section VIII.I.

2096 MIIT, NDRC, MOST, MEE, Ministry of Emergency Management, and NEA.

2097 Available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/yj/art/2022/art_4ef438217a4548cb98c2d7f4f091d72e.html (accessed on 22 August 2023).

2098 See First section, General Requirements.

The above-mentioned overriding goals of technological upgrade, digital transformation and green development are reflected in the Main Objectives of the Guiding Opinion[2099]:

> *By 2025, the petrochemical industry shall basically follow a high-quality development pattern with strong independent innovation capability, reasonable structure and layout, green, safe and low-carbon, with significant improvements in the ability to guarantee high-end products, a significant increase in core competitiveness, and a solid step of high-level self-reliance and self-improvement.*
>
> - *Innovative development. The original innovation and integrated innovation capabilities shall continue to increase, and by 2025, R&D investment of enterprises above a designated size shall account for more than 1.5% of the main business income; develop more than 20 key common technologies and more than 40 key new products.*
> - *Industry structure. The concentration of bulk chemical production shall be further increased, and the capacity utilization rate shall exceed 80%; the level of security of supplies of ethylene equivalent shall be greatly improved, and the level of security of supplies of new chemical materials shall exceed than 75%.*
> - *Industrial layout. The relocation and transformation of hazardous chemical production enterprises in densely populated urban areas shall be completed, forming about 70 chemical parks with competitive advantages. By 2025, the output value of chemical parks shall account for more than 70% of the total output value of the chemical industry.* [...]
> - *Green and safe. The energy consumption and carbon emissions per unit of bulk products shall have decreased significantly, the total emission of volatile organic compounds shall have been reduced by more than 10% compared with the "13th Five Years Plan" period* [...].

Each of these objectives is then further specified in the subsequent sections of the Guiding Opinion. Concerning the technological upgrade, the issuing authorities intend, among others, to "*support enterprises to take the lead in forming collaborative innovation organizations such as industrial technology innovation alliances and upstream and downstream cooperation mechanisms, and support the rational layout of local governments to build regional innovation centers and pilot bases*", to "*conquer core technologies and enhance the momentum of innovation and development,* [...] *accelerate breakthroughs in key technologies such as new catalysis, green synthesis, functional-structural integration polymer material manufacturing, and large-scale application of "green hydrogen"* [...]"[2100]. In this connection, the language of the Guiding Opinion also shows how this type of narrowly-focused regulatory documents is embedded in the wider framework of industrial policies, such as by emphasizing the focus on SEIs which the development of the chemical sector needs to respect: "*focusing on strategic emerging industries such as new generation information technology, biotechnology, new energy, and high-end equipment, we shall increase the specifications of material varieties such as organofluorine silicon, polyurethane, and polyamide, and accelerate the development of*

2099 See First section, Main Objectives.

2100 See Second section, Improve the level of innovation and development.

high-end polyolefins, electronic chemicals, industrial special gases, high-performance rubber and plastic materials, high-performance fibres, bio-based materials, special lubricants and greases and other products"[2101].

Similarly, the industry structure is clearly meant to be the result of regulatory intervention rather than business decisions of market operators, given the language of the Guiding Opinion[2102]:

> *Strengthen policy implementation per categories and scientifically regulate the scale of the industry. Orderly reduce petroleum products and increase chemical products in refining projects and extend the petrochemical industry chain. Enhance the supply capacity of high-end polymers, specialty chemicals and other products. Strictly control the new production capacity of refining, ammonium phosphate, calcium carbide, yellow phosphorus and other industries, prohibit the construction of new mercury (poly)vinyl chloride production capacity, and accelerate the withdrawal of inefficient and backward production capacity. Promote the high-end, diversified and low-carbon development of the coal chemical industry and develop modern coal chemical industry in a sound and orderly manner in accordance with the requirements of ecological priority, production determined by water availability, total quantity control, and agglomeration development* [...].
>
> *Coordinate the layout of projects and promote coordinated regional development.* [...] [C]*oordinate the layout of major projects and promote the concentration of new petrochemical and chemical projects in chemical parks* [...]'.

As in the case of the 14th Raw Materials FYP, the objectives and imperatives forming the substance of the Guiding Opinion are complemented by a concluding section on implementation which addresses relevant administrative bodies, as well as business operators and industry associations[2103]:

> *Relevant departments in all localities shall integrate key tasks into their key work, strengthen supervision during projects and ex post, as well as coordinate and promote the implementation of tasks in accordance with their actual conditions. Relevant enterprises shall, according to the main objectives and key tasks, pragmatically promote relevant work based on their own actual situation and disclose environmental information in accordance with the law. Relevant industry organizations shall play a bridging role, actively serve and guide* [the industry] *and strengthen industry self-discipline.*

Moreover, the final section of the Guiding Opinion also reveals the range of support tools and policies which the Chinese authorities typically use to pursue their industrial policy objectives, including the close link to the financial sectors with banks being expected to provide the necessary monetary backing[2104]:

2101 *Ibid.*

2102 See Third section, Promote the adjustment of industrial structure and Fourth section, Optimize and adjust the industrial layout.

2103 See Eighth section, Strengthen organizational safeguards.

2104 *Ibid.*

Improve supporting policies. Strengthen the coordination between fiscal, financial, regional, investment, import and export, energy, ecological environment, price and other policies and industrial policies. Involve national industry-finance cooperation platforms and promote bank-enterprise connections and industry-finance cooperation. [...].

Moving one level down the planning system (see Chapter 4), provincial plans demonstrate again how the policy objectives and corresponding support tools become more specific and targeted. Two provincial 14th FYPs, namely those for Shandong and Jiangsu, i.e. provinces with traditionally the strongest presence of the chemical industry, illustrate this particularly well[2105].

The Shandong 14th FYP on the development of the chemical industry[2106] ('*Shandong Chemical Plan*') describes the overall situation of the chemical industry as follows[2107]:

The "14th Five Years Plan" is a key period for Shandong's chemical industry to achieve reform, reshaping and power conversion. The chemical industry as a fundamental industry for the national economy shall become still more important [...].

[T]*he industry's level is still low. Products are still mainly low-end and bulk basic varieties, the degree of refinement is not high, high-tech chemical new materials and high-end special chemicals are not developed enough, the industrial chain is short, and key links of the industry chain are weak.* [...] [T]*he driving force for innovative development is insufficient. The enterprises' R & D investment is scarce, the primary innovation capacity is weak, the key common technology research capacity of the industry is not strong* [...].

Against this background the Shandong Chemical Plan sets the following main objectives:

By 2025, the operating income of enterprises above a designated size of the chemical industry in the province shall reach about RMB 2.65 trillion, with an average annual growth rate of about 7% [...].

Strive to build 8 "pilot" enterprises worth more than RMB 50 billion, including 1-2 over RMB 100 billion and more than 10 high-end chemical industry clusters worth more than RMB 100 billion [...].

More specifically, the Shandong authorities intend to focus on building six major chemical industry bases and on expanding industrial clusters. The third section of the Shandong Chemical Plan goes into detail, setting specific development priorities for each of the designated bases,

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2105 Other provincial 14th FYP are not significantly different in their language and structure. See for example the Jilin 14th FYP on the development of petrochemical industry, available at: http://gxt.jl.gov.cn/xxgk/zcwj/sgxtwj/202109/t20210914_8217060.html (accessed on 22 August 2023) or the Jiangxi 14th FYP on high quality development of petrochemical industry, available at: https://huanbao.bjx.com.cn/news/20211115/1187880.shtml (accessed on 22 August 2023). Concerning Shandong and Jiangsu, see also at: www.chinalubricant.com/news/show-103647.html (accessed on 22 August 2023).

2106 Available at: http://gxt.shandong.gov.cn/module/download/downfile.jsp?classid=0&filename=17e54531cb74483596b5cca1a40ec8d8.pdf (accessed on 22 August 2023).

2107 See Preface and First Section of the Plan.

namely the Lubei high-end petrochemical base, the Eastern chemical new material industry agglomeration area, the Luzhong high-end special chemical industry agglomeration area, the Lunan modern coal chemical industry agglomeration area, the Demonstration Zone for the Transformation of Chemical Enterprises in Northwest Luxi and the Huanghai Lingang Petrochemical Industrial Zone[2108]. The geographical listing of priorities is complemented by priorities according to subsectors[2109], namely those for petrochemicals, coal-based fine chemical industry, salt chemical industry, tyre industry, new chemical materials, marine chemical industry, fine chemicals and biochemicals. In addition, the Shandong Chemical Plan foresees certain so-called special actions, such as for technological innovation[2110] or for industrial chain upgrading[2111]. The concluding section of the Shandong Chemical Plan focuses on implementation modalities, both in term of management oversight, as well as support measures[2112]:

> *Strengthen organizational leadership and overall planning. Improve the linkage mechanism of the chemical industry special action system in provinces, cities and counties, further improve the long-term supervision mechanism for safety and environmental protection, clarify work responsibilities, increase staff, strengthen overall coordination, and solidly promote the implementation of work. Optimize the management model of chemical parks, and clarify the management responsibilities, rights and limits of park management agencies and local governments.* [...]
>
> *Increase financial support. Strengthen fiscal policy incentives, give full play to the role of special funds, support chemical enterprises to accelerate technological transformation, intelligent transformation, industrial transfer, relocation into parks, eliminate outdated equipment, etc., and implement policies such as tax exemption for imported equipment related to key technologies and equipment, VAT credit refund, additional deduction of research and development expenses, and insurance compensation for the first (set) of technical equipment. Actively guide all kinds of financial institutions and social capital to invest in the chemical industry, give full play to the advantages of policy finance, development finance and commercial finance, and increase financial support for key areas of chemical technology* [...].

With national level industrial policies being often effectively carried out at sub-national levels and with the higher-level policy objectives and targets correspondingly becoming more and more specific on lower planning levels, the 14th FYP on high-end development of chemical

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2108 See Third section, subsection (1).

2109 See Third section, subsection (2).

2110 [G]uide enterprises to increase investment in research and development, cultivate a number of innovation platforms such as state key laboratories and provincial and ministerial laboratories, and encourage enterprises to set up joint platforms such as research institutes. [...]

2111 [G]ive play to the agglomeration effect of pilot enterprises, establish an industrial chain cooperation mechanism led by enterprises being "heads of industry chains", supporting upstream and downstream enterprises, financing large and small enterprises, and ensuring joint participation of associations, universities, research institutes, financial institutions, etc., to build an excellent industrial ecology. [...] Support pilot enterprises to become bigger and stronger and enhance the leading role in the development of the industrial chain.

2112 See the Seventh section.

industry of Jiangsu[2113] ('*Jiangsu Chemical Plan*') provides one of the most telling examples of the entire planning system functions. The structure of the Jiangsu Chemical Plan does not differ too much from similar planning documents: the Jiangsu Chemical Plan presents the overall situation of the industry[2114], it identifies the main issues[2115], sets overall[2116] and specific

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2113 Available at: http://gxt.jiangsu.gov.cn/art/2021/8/25/art_83673_10000511.html (accessed on 22 August 2023).

2114 See Preface, Section 1.1.5. and Section 2.2. of the Jiangsu Chemical Plan: [...] *The chemical industry is one of the pillar industries of Jiangsu Province, is an important and fundamental industry in our province, has formed from oil refining, ethylene production to basic chemical raw materials, synthetic materials, special chemical manufacturing and other industrial systems* [...]. *Overall analysis: the province has formed a chemical industry system dominated by fine chemicals, widely distributed petrochemical, organic raw materials and synthetic materials, and accelerated the layout of new chemical materials, with distinct industrial characteristics in various cities and the proportion of downstream products in the industrial chain gradually increasing. However, the problematic aspects of scattered layout, low industrial concentration, and insufficient high-end application categories still need to be improved during the "14th Five-Year Plan" period.*
[...]. *The overall requirement for the high-quality development of China's petrochemical industry is to take "reducing production capacity and making up for shortcomings" as the core, and "adjusting the structure and promoting upgrading" as the main line, promoting supply-side structural reform, vigorously implementing innovation-driven and green sustainable development strategies, and actively cultivating strategic emerging industries. Promote the continuous optimization of industrial structure, product structure, organizational structure and layout structure, and strive to enhance the international competitiveness and sustainable development ability of the industry* [...].
During the "14th Five-Year Plan" period, we shall continue to control the new production capacity of excess industries such as oil refining, urea, ammonium phosphate, caustic soda, polyvinyl chloride, soda ash, calcium carbide, and yellow phosphorus, and implement the policy of "equal or reduced replacement".
[...]
Through the integration of resources, accelerate the construction of a number of large-scale enterprises and enterprise groups with a leading role, improve industrial concentration, and form a number of world-class enterprises and "single champion" enterprises. [...]
Focusing on meeting the main needs of major national projects, the national economy and people's livelihood, accelerate the cultivation of petrochemical and chemical strategic emerging industries [...]. Focus on the development of high-performance, high-value-added fine chemical products, and move towards the middle and high end of the industrial chain. [...]
Actively encourage domestic enterprises to carry out overseas mergers and acquisitions, equity participation and the establishment of experimental bases and marketing service systems to strengthen the scale and competitiveness of enterprises. Actively participate in the activities of international industry organizations, participate in the formulation of international rules [...].

2115 See Section 1.2.1. of the Jiangsu Chemical Plan: [T]*he overall products are still dominated by general synthetic materials, traditional fine chemicals, etc., and the proportion of differentiated products and high-end products is relatively low* [...]. *Engineering plastics, high-end polyolefin plastics, special rubber, electronic chemicals and other new chemical material products are still in the initial stage of development, and there is still a certain gap with foreign high-end products, which cannot fully meet the requirements of the downstream related industries' transformation and upgrading.* [...]
The layout of the chemical industry in the province lacks overall planning, and the positioning of the park is not clear. The improvement of each chemical park clearly focuses on the development of 1-2 leading industrial chains [...]. *Some chemical parks are characterized by the simple agglomeration of enterprises, and there is no intensive and integrated function, and the management level is not high.* [...]

2116 Concerning industry layout (Sections 3.3.1. and 4.1.1. of the Jiangsu Chemical Plan): [...] *By the end of the "14th Five-Year Plan", we shall strive to increase the output value contribution rate of chemical parks and concentration areas in the province to more than 70% and the rate of chemical enterprises entering chemical parks shall increase from the current 42.7% to more than 50%.* [...]
The layout of the chemical industry in the province follows the requirements of the national and provincial industrial planning and layout plan, with the chemical park as an important development carrier and as the core leading the development of the chemical industry in the districted cities. The positioning of

objectives and foresees corresponding implementation and support tools. However, while the emphasis put on "*major needs of major national projects*", on industrial concentration, on oversees acquisitions or on forming "*a number of world-class enterprises and single champion enterprises*" shows how national level policies are incorporated and implemented through the entire administrative apparatus. The level of detail in the specific objectives established for Jiangsu's chemical industry demonstrates the influence of government authorities in shaping the development of the industry. Given that level of detail, those priorities - set out in plain text in the plan - are presented below in a table form for reasons of presentational economy.

Objectives for individual locations in Jiangsu[2117]:

Locality	Objectives	Examples of chemicals listed in the Plan
Coastal Industrial Zones		
Lianyungang	Promote the integration of refining and chemicals Development of high-end polyolefins Promote the deep processing of raw materials	Ethylene, propylene and carbon tetrapolymers, long-chain α-olefin comonomer monomers, ethylene oxide, α-olefins, benzyl chloride, acid chloride, hydrogen, chloroacetic acid, acrylonitrile, ethylene oxide, phenol acetone, benzene, vinyl acetate, polyester, fatty acids, fatty alcohols, fatty amines PET/PBT, phenol/keto, bisphenol A, 1,3-propanediol-PTT, biological nylon materials, aramid fibres, polyimides and halogenated polyolefins
Yancheng	Development of new medicines Development of new chemical materials	Polyamide engineering plastics, nylon filaments, high-performance rubber materials, new material additives, hydrochloric acid, sulfuric acid, liquid crystal orientation agent, electronic special gas
Nantong	Development of new chemical materials Development of fine chemicals	Special polyesters, special polyurethanes and their additives, polyamides, water treatment agents, dimeric acids and derivative products
Industrial zones along the river/along the lake		
Nanjing	Petrochemical structure optimization C1 chemical engineering transformation and developments	Metallocene polyolefin, ethylene-vinyl acetate copolymer, ultra-high molecular weight polyethylene, polyolefin elastomer, cycloolefin copolymer, ethylene-vinyl alcohol copolymer, polybicyclopentadiene, nitrile rubber, halogenated butyl rubber,

industrial development follows the relevant industrial policy requirements of the state and our province [...].

Concerning industry structure (Section 3.3.2. of the Jiangsu Chemical Plan): *By the end of the "14th Five-Year Plan", according to the product output value, the proportion of high-end products (new chemical materials, fine chemicals in new fields) has increased from about 15% to 23%.* [...]

2117 Section 4.2. of the Jiangsu Chemical Plan.

		food additives, high-performance surfactants, high-performance coatings, new adhesives
Suzhou	Fine chemical optimization and upgrading Development of new material industry	High-purity reagents for semiconductors, silicone resin, special silicone rubber, electrode materials, lithium battery diaphragms and electrolytes, fourth generation of blowing agents and advanced refrigerants
Wuxi	Reinforce the industry level of materials Improve the quality of fine chemicals Serve the electronic information industry	Special polyesters, special nylon engineering plastics, high-end coatings, rubber and plastic additives for special rubber and engineering plastics, automotive coatings, industrial protective coatings, UV curing coatings, high-purity reagents, new polyurethanes, cyclic olefin polymers
Changzhou	Enrich the downstream industry of salt chemical Development of new materials	Heavy anti-corrosion coatings, automotive coatings, powder coatings and other new coatings, high-end chlorine derivatives, toluene chloride, carbon fibre-based high-performance fibres, photoinitiators, electronic grade high-purity reagents
Zhenjiang	Development of fine chemicals at high level	High-end electronic chemicals, advanced polymer materials, environmentally friendly fine chemicals, new energy power battery materials, silicone new materials
Yangzhou	Upgrading and developing high-performance polyester Promoting special chemicals	PTA, PBT, PBST, phenol, bottle flakes, staple fibre, aramid, degradable plastics, epoxy resins
Taizhou	High-quality development of fine chemicals	Acrylic acid and esters, styrene, chlor-alkali, ethylene, propylene, high-end polyolefins, α-olefins, wet electronic chemicals, semiconductor high-purity reagents, lithium battery key materials, special rubber and elastomers, styrene-butadiene, acrylate rubber, EPDM rubber
Northern Jiangsu Industrial Zone		
Xuzhou	Efficient development of fine chemicals Upgrading coal-based materials	Water treatment chemicals, lithium battery anode materials, fertilizers, green pesticides, biochemicals
Suqian	Optimize the life sciences industry Develop the new materials industry	New rubber and plastic materials, electronic chemicals

Huai'an	Development of salt chemical new materials Constriction of life sciences industry chain	New fluorine and silicon materials, green pesticides, chlorinated hydrocarbons, refrigerants, rubber and plastic new materials

Selected objectives for subsectors of the chemical industry in Jiangsu (table format used to provide a better visual over, the Jiangsu Chemical Plan uses [2118]:

Subsector	Objectives	Examples of how the objectives are specified/measured
Petrochemicals	Accelerate the upgrading of the oil refining industry and promote the integrated development of oil refining and chemical industry Optimize the industrial structure and promote the rational layout of the petrochemical industry Promote the diversification of raw materials and accelerate the construction of large-scale petrochemical apparatus	[...] In 2025, the annual processing capacity of crude oil in our province shall be controlled below 60 million tons / year, and the proportion of refined oil products and olefin raw materials shall be reasonably optimized. [...] [W]e shall promote the construction of the 1 million tons/year ethylene project in Nanjing in a timely manner to provide more sufficient raw materials for the long-term development of Nanjing Jiangbei New Material Science and Technology Park. In terms of the selection of downstream olefin products, we shall give full play to the technical advantages of Sinopec and BASF, focus on the development of high-end and differentiated products, and avoid cost competition with other new petrochemical projects in China; promote the construction of a 600,000 tons/year propane dehydrogenation plant in Yangzhou to provide sufficient olefin resources for Yangzhou chemical park. [...] At the end of the "14th Five Years Plan", 16 million tons of oil refining / year, 4.05 million tons of ethylene / year, 2.8 million tons of paraxylene / year, 3.08 million tons of propylene and 4.96 million tons of refined oil products shall be made available, forming a refining and chemical integrated petrochemical industry agglomeration, providing resource guarantee for the development of downstream industries.
Organic raw materials	Accelerate the construction of leading enterprises and	[...] Promote the construction of key supporting raw material supply systems, actively develop the weak

[2118] Section 5.2. of the Jiangsu Chemical Plan.

	increase the depth of processing Develop organic raw materials to meet downstream demands Encourage green processes and optimize production systems	domestic industrial base, directly restrict the development of high-end polyolefins, special polyesters, engineering plastics, high-end special chemicals and other high-end petrochemical products such as key raw materials and chemical intermediates, focus on promoting the construction of PETG key raw materials CHDM, nylon 66 key raw materials, adiponitrile, high-end polarizer key raw materials PVA and other projects. [...]
Synthetic materials		
High-end polyolefins	Promote integrated construction and increase industrial concentration	[F]ocusing on the development of polyethylene, polypropylene special materials and modified products, with EVA, ultra-high molecular weight polyethylene, POE elastomers, cyclic olefin polymers / copolymers (COC/COP) and other special polyolefin products, to achieve high-end development of the polyolefin industry.
Styrene-based synthetic resins	[E]nhance the level of integrated development and maintain cost competitiveness	
Thermoset resins	[I]mprove the production level and application level of thermosetting resin	[...] Accelerate supply-side structural reform, reduce the proportion of low-competitive enterprises through mergers and acquisitions, market-oriented elimination, and other means, and promote the healthy development of the industry. Strengthen the regional concentration of production capacity [...].
New chemical materials		
Silicon materials	[I]ncrease the development of silicon downstream products	[E]nhance the supply level of high-end silicone downstream products in our province and meet the downstream industry's demand for high-end silicon material products.
Fluorine materials	[A]chieve the high-quality development of the fluorine material industry itself and help the transformation and upgrading of the real economy	Focus on the development of domestic blank or foreign-funded enterprises monopoly products to achieve industrialization or industrial upgrading, and greatly improve the self-sufficiency rate of high-end fluorine material products. Support the industrialization of high-performance fluorine material varieties and grades.

Engineering plastics	[I]ntegrate into the East China regional market [...] and vigorously promote the construction of the engineering plastics production system	[...] Give full play to the advantages of the integration of petrochemical bases, accelerate the construction of projects such as phenol and bisphenol A, and extend the development of bulk engineering plastic products such as polycarbonate. Accelerate the construction of engineering plastics with a low degree of industrialization or still non-existent in the province and encourage the development of special engineering plastics such as polyphenylene sulfides, polyimides, polyetheretherketones, and polynaphthalate ethylene glycol esters.
Polyurethanes and their raw materials		[...] Strengthen the supply system of polyurethane raw materials and encourage the development and project construction of modified isocyanate varieties.
Special rubber and elastomers		Closely follow the development trend of the special rubber and elastomer industry, combined with the domestic and provincial market conditions, raw material conditions and industrial base, focus on the development of varieties with large growth space and convenient raw material supply in the domestic market [...].
High performance fibres		Encourage existing high-performance fibre enterprises to expand production scale, increase market share, and improve product quality through improved process technology. [...]
Fine Chemicals[2119]		
Pesticides	Accelerate the research and development of innovative drugs [...]. Moderately reduce the overall scale of the province's pesticide industry [...].	[F]orm a gradient, hierarchical and complementary industrial chain and product group in the province.

2119 The Jiangsu Chemical Plan sets the following target for this subsector: „*By the end of the "14th Five-Year Plan", the development structure and layout structure of fine chemical industry shall be optimized, the output value of fine chemicals in new fields shall account for more than 30% of the total fine chemicals, and the output value of fine chemical enterprises in the chemical park (concentration) area shall account for more than 75% of the total fine chemicals.*"

Paints	Orderly develop the environmentally friendly, functional, decorative, high-performance architectural, decorative and automotive coatings Consolidate and strengthen the development of paint raw materials such as synthetic resin Optimize and improve the process level of the coating industry	At the end of the "14th Five Years Plan", the layout of the paint industry shall be optimized, and the output value produced in the chemicals parks (concentration areas) shall increase to about RMB 40 billion, the output value outside the chemical park (concentration area) shall drop to about RMB 15 billion, and the output in the chemical park (concentration area) shall account for more than 70%.
Synthetic material additives	Guide the synthetic material additives industry to develop in the direction of environmental protection, efficiency and high-technology Develop high value-added synthetic material additives in key chemical new material supporting fields	During the "14th Five Years Plan" period, we shall further optimize the layout of the synthetic material additives industry, strive to increase the total output value to RMB 35 billion, concentrate the industrial in chemical parks (concentration areas), increase the output value in chemical parks (concentrated areas) to RMB 30 billion, and increase the proportion of output value produced in chemical parks (concentration areas) area shall exceed 70%.
Multifunctional intermediates	Integrate the production capacity of multi-functional intermediates with large and dispersed production capacity [...] increase the elimination and integration efforts, and enhance the concentration of the industry.	By the end of the "14th Five Years Plan", we shall strive to maintain the total output value of the multi-functional intermediate industry at about RMB 20 billion. The output value of multi-functional intermediates in chemical parks (concentration areas) shall increase to RMB 15 billion, while the share of output value produced by enterprises outside the chemical parks (concentration areas) area shall shrink to about RMB 5 billion.
Dye pigments	Eliminate low-output enterprises [...], support the industry's leading enterprises to consolidate production capacity through mergers and acquisitions	By the end of the "14th Five Years Plan", the industrial structure of dye pigments and their intermediates shall be significantly optimized, the output value in chemical parks (concentration areas) shall rise to RMB 14 billion, the output value outside the chemical park (concentrated) area shall drop to RMB 5 billion, and the output value produced in chemical parks (concentrated areas) area shall account for 75%.

Specialty chemicals in other fields	Gradually eliminate enterprises with small scale and low production [...], enhance industry concentration, cultivate [...] enterprises [...] with international competitiveness and make the average output value of enterprises reach more than RMB 100 million	At the end of the "14th Five Years Plan", we shall strive to maintain the total output value of the special chemical industry in other fields of RMB 16 billion, the layout structure shall be significantly improved, the share of the output value produced in chemical parks (concentration areas) shall rise to RMB 11 billion, the output value produced outside chemical parks (concentration areas) shall drop to RMB 5 billion, and the share of output value produced in the chemical park (concentrated) area shall rise to about 70%.
Chemical APIs[2120]	[E]nrich product lines and product clusters, and promote the upgrading of the pharmaceutical and intermediate industry base and the modernization of the industrial chain	
Oleochemicals	Accelerate the construction process of new projects in the existing chemical park (concentration) area, encourage leading enterprises to increase production capacity, enhance competitiveness and market share, and promote the improvement of production concentration in the industry	By the end of the "14th Five Years Plan", we shall strive to achieve a total output value of RMB 15 billion in oleochemical industry, and the output value of oleochemical industry in chemical parkS (concentration area) shall reach about RMB 10 billion.
Adhesives	Focus on the development of high-quality, high-performance, high added value and environment-friendly products. Focus on the development of adhesive products in the fields of electronic and electrical appliances, rail transit, aerospace, new	At the end of the "14th Five Years Plan", the total output value of the adhesive industry shall remain at about RMB 10 billion, the superior production capacity shall be included into the development and integration of chemical parks (concentration areas), the output value in chemical parks (concentration areas shall increase to about RMB 8 billion, the output value outside chemical parks (concentration area) shall fall to about RMB 2 billion, and the

2120 Active Pharmaceutical Ingredients.

	energy, intelligent manufacturing, and green packaging materials.	proportion of the output value of enterprises located in parks shall increase from the current 60% to about 80%.
Inks	Further enhance the industry concentration [...], encourage enterprises with scale and product advantages to further improve product performance and added value	At the end of the "14th Five Years Plan", we shall strive to increase the total output value of the ink industry to RMB 8 billion, the superior production capacity shall be included into the development and integration of chemical parks (concentration areas), the output value in chemical parks (concentration area) shall rise to about RMB 5 billion, the output value outside chemical parks (concentration areas) shall rise to about RMB 3 billion, and the share of the output value of enterprises in chemical parks (concentration areas) shall rise to more than 60%.
Electronic chemicals	Take advantage of the solid industrial foundation and market conditions of Jiangsu Province, vigorously develop electronic chemicals that support integrated circuits, flat panel displays, new energy batteries and other fields Expand the scale of the industry, improve product quality, fill the technical gap, improve the independent production capacity [...], and create an internationally competitive electronic chemical industry cluster.	At the end of the "14th Five Years Plan", we shall strive to achieve a total output value of RMB 34 billion in the electronic chemical industry, an output value of about RMB 28.5 billion in chemical parks (concentration areas), and an output value of about RMB 5.5 billion outside chemical parks (concentration areas).
Environmental protection chemicals		At the end of the "14th Five Years Plan", the environmental protection chemical industry shall strive to achieve a total output value of RMB 15 billion, the output value in chemical parks (concentration areas) shall rise to about RMB 9 billion, the output value outside the chemical park (concentrated) area shall rise to about RMB 6 billion, and the share of output value of enterprises located in chemical parks shall rise to 60%.

Surfactants		At the end of the "14th Five Years Plan", the surfactant industry shall strive to achieve a total output value of RMB 14 billion, the output value in chemical parks (concentration areas) shall rise to about RMB 9 billion, the output value outside chemical parks (concentration areas) shall drop to about RMB 5 billion, and the output value of enterprises located in chemical parks shall account for more than 60%.
Textile chemicals		At the end of the "14th Five Years Plan", the number of textile chemical production enterprises [...] shall be reduced to less than 40, and enterprises with strong competitive advantages shall be cultivated in three major fields [...]. The textile chemical industry shall strive to achieve a total output value of RMB 10 billion, the output value produced in chemical parks (concentration areas) shall rise to about RMB 5 billion, the output value produced outside chemical parks (concentration areas) shall be compressed to less than RMB 5 billion, and the output value of enterprises located in chemical parks (concentration areas) shall account for more than 50%.
Concrete admixtures and their raw materials		At the end of the "14th Five Years Plan", the total output value of the concrete admixture and its raw materials industry shall strive to reach RMB 10 billion, the output value produced in chemical parks (concentration areas) shall rise to about RMB 9.5 billion, the output value produced outside chemical parks (concentration areas) shall drop to about RMB 500 million, and the output value of enterprises located in chemical parks (concentration areas) shall account for about 95%.
Food and feed additives		At the end of the "14th Five Years Plan", strive to achieve a total output value of RMB 7 billion of food additives, the output value produced in chemical parks (concentration areas) to about RMB 6.5 billion, the output value produced outside chemical parks (concentration areas) shall reach about RMB 500 million, and the output value produced by

		enterprises located in the park shall account for more than 90%.
Catalysts	Improve the development quality of the catalyst industry [...], and develop catalysts with diversification, high selectivity, high stability and long life. Develop catalyst varieties that meet the needs of chemical manufacturing enterprises.	At the end of the "14th Five Years Plan", the catalyst industry shall strive to achieve a total output value of RMB 6 billion, the output value produced in chemical parks (concentration areas) shall rise to about RMB 5.5 billion, the output value outside the chemical park (concentrated) area shall remain at about RMB 500 million, and the share of output value produced by enterprises located in chemical parks (concentration areas) shall account for 90%.
Paper chemicals	[...] Strengthen the attraction of leading papermaking chemical companies in the world and build internationally competitive manufacturing equipment.	At the end of the "14th Five Years Plan", the province's papermaking chemical industry shall strive to achieve a total output value of RMB 6 billion.
Lubricant additives	[...] The development goal [...] is to provide a comprehensive solution for all kinds of machinery and applications.	At the end of the "14th Five Years Plan", the province's lubricant additive industry shall strive to achieve a total output value of RMB 5 billion, and the output value of enterprises in chemical parks (concentration areas) shall rise to more than 80%.
Chemical reagents		At the end of the "14th Five Years Plan", 5-10 chemical reagent production enterprises with an annual output value of RMB 1 billion shall be cultivated, and the chemical reagent industry in the province shall strive to achieve a total output value of RMB 5 billion, and the output value of enterprises located in chemical parks (concentration areas) shall rise to 75%.
Inorganic chemical industry		
Chlor-alkali	Total quantity control, quality and efficiency improvement, optimization of configuration [...] Adopt advanced energy-saving and emission-reduction technologies to	Through mergers and acquisitions, elimination of outdated equipment, capacity replacement and horizontal alliance, implementation of government guidance, enterprise voluntary actions, investment attraction and market-oriented use of capacity replacement indicators trading, [*we shall*] guide production capacity, resources and market

	transform and upgrade industries and enterprises [P]romote the downstream industries of chlorine and hydrogen to develop towards high-end, functional and refined direction Extend and expand the regional chlorine industry chain [...]	towards taking into account the strengths of enterprises so as to concentrate and integrate the chlor-alkali industry, foster leading backbone enterprises, optimize the industrial structure and resource allocation, improve the degree of intensification.
Soda ash		Promote the integration of one million tons of underground circulation alkali production. [...] Strive to set up a project to build national petroleum strategic reserves and commercial reserves and use the advantages of salt caverns for oil storage to provide raw material supply security for the development of the chemical industry [...]. [C]reate the core competitiveness of the industry, increase the share of green-process based soda ash production capacity, like for instance alkali underground circulation [...].
Inorganic salts		During the "14th Five Years Plan" period, we shall no longer develop basic inorganic salt products, focus on the development of inorganic powder new materials, we shall create an inorganic new material industry cluster, and promote the optimization and upgrading of the entire industrial chain of inorganic salts. Focusing on the needs of high-end new materials, new energy industry, national defense and military industry, nuclear industry, electronic information, energy conservation and environmental protection, building materials, food and medicine [...]
Fertilizers	No more expansion of the production of basic fertilizers [...] Encourage enterprises to develop coal gasification polygeneration projects without expanding the	

	scale of existing coal gasification plants.	

The extensive setting of objectives for individual localities/industrial zones, as well as for subsectors of the chemical industry, in combination with the implementation requirements specified in the Jiangsu Chemical Plan[2121] shows that the practices of the Chinese authorities, which entail setting specific targets in terms of industrial structure, product range and output and which were documented for the 13th FYP period[2122] continue to be the norm. The more detailed policies effectively shaping how the industry chains operate may be more firmly nested at the lower level of the planning matrix during the 14th FYP period. However, the structure and the level of specificity has not changed significantly when comparing – at the national sectoral level – the 13th FYP for the Petrochemical and Chemical Industry (2016-2020)[2123] with the above-mentioned Guiding Opinion on Promoting the High-quality Development of the Petrochemical and Chemical Industry During the 14th Five Years Plan Period or – at the provincial level – the Jiangsu 13th[2124] and 14th FYPs for the chemical sector. Indeed, similar to the Jiangsu 13th FYP for the chemical sector[2125], the Jiangsu government summarizes the growth and output targets in its 14th FYPs for the chemical sector as follows[2126]:

> *It is estimated that by the end of the "14th Five Years Plan" period, the total output value of the chemical industry in Jiangsu Province shall reach more than RMB 1.4 trillion, with an average annual growth rate of more than 6.0%. Among them, the output value of the petrochemical industry shall have increased by 10.8%, with an average annual growth rate of 1.7%; the output value of the organic raw material industry shall have increased by 49.2%, with an average annual growth rate of 6.9%; the output value of the synthetic materials industry shall have increased by 86.8%, with an average annual growth rate of 11.0%; the output value of the fine chemical industry shall have increased by 36.0%, with an average annual growth rate of 5.3%; the output value of the new chemical material industry shall have increased by 137.8%, with an average annual growth rate of 15.5%; the output value of inorganic chemicals and fertilizers and other industries shall have increased by 3.9%, with an average annual growth rate of 0.6%.*

In the same vein, the list of support instruments to implement the objectives of the Plan resembles the tools enumerated in the 13th FYP[2127] of the province. The same applies with respect to the emphasis on "going global", i.e. seizing opportunities by local chemical enterprises abroad, as well as attracting investors to Jiangsu[2128]:

2121 See Section VIII of the Jiangsu Chemical Plan.
2122 See Chapter 16 of the 2017 version of this Report.
2123 See the 2017 version of this Report, p. 406-412.
2124 *Ibid.*, p. 415-423.
2125 *Ibid.*, p. 418-419.
2126 See Section 5.3. of the Jiangsu 14th FYP for Green Industrial Development.
2127 Including for example funding support, taxation policies, support for investment in the sector etc., see the 2017 version of this Report, p. 422-423.
2128 See Sections 8.5 and 8.7 of the Jiangsu Chemical Plan.

Pay close attention to the trend of national industrial restructuring, firmly seize any excellent opportunity of industrial transfer domestically and abroad, and promote the docking of fundamental industries, leading industries, strategic industries and supporting industrial projects with developed countries as comprehensive, wide-ranging, multi-level and high starting points; actively highlight the carrier role of major projects in opening up to the outside world, while encouraging enterprises to go global, actively introduce foreign strategic investors [...].

Give full play to the guiding role of government investment funds[2129], *flexibly expand financing channels, and guide social capital investment. Adopt a variety of investment methods such as equity, debt, combination of equity and debt, and investment and loan package, focusing on new materials, new energy, energy conservation and environmental protection, new medicine and biochemical industry, and supporting the construction and development of transformation and upgrading projects such as industrial mergers and reorganizations, industrial chain integration, transfer into parks, and optimization of existing industries.* [...].

In sum, the Shandong and Jiangsu provincial 14th FYPs for the chemical sector provide good examples of how lower-level plans implement the objectives of the national planning documents and transpose them into specific industrial policy tasks, often broken down to detailed turnover targets for narrowly defined subsectors of the chemical industry.

A further example of provincial level plans, the 14th FYP for the Development of the Chemical Industry Zone in Shanghai ('*Shanghai Plan*')[2130] shows another important aspect of the planning system, namely how – beside the implementation of the higher-level plans' objectives – the lower-level plans serve as guidelines on CCP leadership in enterprises (see Chapter 3).

First of all, the Shanghai Plan puts the situation of the local industry into the context of the national industrial policies and international developments[2131], following which it recalls the basic principles, including to adhere to "*taking the Party's leadership as the fundamental principle*", "*taking green development as a predominant direction*" and "*taking development towards high-end direction as the main target*"[2132]. These basic principles are then specified further, such as, concerning development towards high-end direction[2133]:

[...] *During the "14th Five Years Plan", the Shanghai Chemical Industry Zone shall meet the strategic needs of the State and the Municipality, focus on the goal of building "two bases" with an international benchmark, and further extensions towards the "fine, green, high-tech, high efficiency and high added value"* [...]

Do a good job of joint cooperation with other petrochemical bases in Shanghai to ensure the supply of raw materials and synthesis gas. Support the main enterprises in the park, make good use of existing resources such as ethylene and propylene,

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2129 See Section 6.5.1.

2130 Available at: https://huanbao.bjx.com.cn/news/20211202/1191423.shtml and http://seatone.net.cn/uploads/tan/055.pdf (accessed on 22 August 2023).

2131 See Section 1 – Basic Development.

2132 See Section 2.1.2. – Basic Principles.

2133 See Section 3.1.1. - Develop core industries towards high-end.

adjust the product structure, and further develop high value-added products. Explore and strengthen the guarantee of raw materials, study the key chains in the industrial chain such as polyurethane, promote key projects such as adiponitrile, make full use of raw material resources such as MDI and nylon in the park, strengthen cooperation with key enterprises, introduce downstream applied material enterprises, extend core industrial chains such as polyurethane and nylon, and create polyurethane and nylon bases with international influence.

Or, concerning the green development[2134]:

Establish the concept of green and low-carbon development, strive to protect environment and control pollution, carry out the third round of work for comprehensive environmental improvement in the Jinshan District, strengthen the concept of cleaner production and the construction of green factories and green [industrial] parks, and make the ecological environment of the industrial parks more pleasant.

As in the case of the Shandong and Jiangsu plans described above, the Shanghai plan also contains a dedicated section on support measures and implementation[2135]. According to this section, the local authorities should, among others,

[c]*omprehensively consider the organisation of expenditure funds for major projects, and effectively implement the key development projects of the park. Duly keep up with the new round of special development fund policies for chemical zones, amend the management measures for special development funds in due time, improve the orientations of special fund support, examine the establishment of industrial investment funds, and attract social capital to participate. Strive for the support of the national and municipal industrial special policies and promote the implementation of district-level enterprise support policies in the park.* [...]

Strengthen the leading role of planning and translate the main goals and tasks into the plans. Duly ensure plans' convergence and coordination, strengthen planning as an important basis for formulating annual plans and relevant policies, and decompose the target tasks into financial budget plans, various action plans and work plans of responsible departments. Implement supervision and evaluation, and strengthen continuous follow up, evaluation and assessment of the completion of indicators.

Importantly, the Shanghai Plan contains instructions on how the Party work should be integrated into the functions of the local chemical industry, including detailed provisions on strengthening the Party building and improving the structure of grass-roots Party organizations[2136]:

Comprehensively implement the general requirements of Party Building and the Party's organizational lines in the new era, adhere to and strengthen the Party's overall leadership, improve the construction of the Party's organizational system,

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2134 See Section 3.2.2. - Improve green and ecological construction capabilities.

2135 See Section 4 – Implementation measures.

2136 See Section 3.7. - Strengthen Party building in the park and create a better structure for grass-roots organizations.

firmly establish a clear orientation of paying great attention to the grass-roots level, take the Party's political construction as the guide, focus on improving organizational strength, and comprehensively improve the quality and level of Party building in the chemical industry park.

Build a strictly organized system. Give full play to the leading and core role of the Party in overseeing the overall situation and coordinating all parties, build an organization structure and working mechanism for Party building in the park under the leadership of the Party organisation of the management committee, strengthen the centralized and unified leadership over the core work of the park and Party building in the park [...].

Promote the comprehensive and strict governance of the Party. Strictly implement the regulations on the comprehensive and strict governance of the Party, taking good care of Party building as the greatest political achievement, [...].

In view of the above examples of 14th FYPs at different levels of the planning matrix, a number of observations can be made about the totality of planning documents for the chemical sector during the 14th FYP period:

- the plans do not significantly differ from the corresponding planning documents of the 13th FYP period[2137];
- the plans are firmly rooted in the ideology set by the CCP and they explicitly acknowledge the Party's leadership;
- the plans reflect wider national industrial policy objectives, such as "*dual circulation*" (see Chapter 2), technological upgrade or emphasis on SEIs;
- the cascade of plans in which subsequent, lower-level plans refer to and seek to implement higher level plans remains in place;
- the plans contain certain standard elements which ensure seamless transmission between planning periods and various levels of planning documents; those standard elements are in particular *(i)* the review of previous planning period achievements, *(ii)* the objectives for the upcoming planning period, *(iii)* the targets to achieve the objectives set, *(iv)* the government support measures, and *(v)* the implementation requirements/measures.

The planning documents for the chemical sector therefore has a direct bearing on the allocation of resources within the industry (see also Chapter 4), thereby directly affecting the business conduct of individual economic operators.

16.3.2. Examples of the Regulatory Framework for Specific Sub-sectors

As shown in the previous section, the 14th FYPs, in particular at the sub-national level, outline the development policies and industrial targets at a fairly granular level of subsectors – as narrowly defined as, for example, dye pigments or inks. These targets and policies designed to implement and give shape to the goals established in the higher-level policy documents. In practice, the relevant sub-sectors will be provided with a favourable business environment in which the industrial policy objectives can be achieved while the goverment authorities will be,

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2137 See Chapter 4 of the 2017 version of this Report.

on the other hand, intervening on an ad-hoc basis where the long-term industry goals may be at risk due to unforeseen disruptions.

A good case in point is the fertilizers subsector and the 2021 NDRC Notice on ensuring the future domestic supply and price stability of fertilizers ('*Notice*')[2138]. The Notice, issued in response to rising fertilizers prices, illustrates not only nature of the Government policies but, importantly, also the transmission mechanisms under which policies devised by the Party Central Committee are articulated by the central government authorities in consultation with relevant SOEs, explicitly addressed to a range of further authorities and market operators, with subordinate authorities being given precise instructions on implementation and reporting back to the issuing authorities. A key feature of the system remains the role that SOEs play in implementing Government policy, where they would for example enter into contracts not because they are commercially advantageous, but because it supports a different government policy objective. Consequently, the Notice also implies that local governments should ensure that private companies and cooperatives follow suit as well.

In more detail, the Notice first clarifies its context and overall purpose by declaring that "[c]*hemical fertilizer is a special commodity related to national food security, and ensuring the basic stability of fertilizers' supply and prices is of great significance to* [...] *safeguarding the overall situation of national food security"* and that "[s]*ince the beginning of this year,* [...] *domestic fertilizer prices have risen significantly, and the prices of major product types such as nitrogen, phosphorus and potassium have increased significantly*". In view of this, "[i]*n accordance with the decision-making and deployment of the Party Central Committee and the State Council, in order to stabilize the supply and price of the fertilizer market in the coming period*" the Notice was issued, addressing to the following particular recipients:

> *The competent departments of the Development and Reform Commission, the Department of Industry and Information Technology, the Department of Finance (Bureau), the Department of Ecology and Environment (Bureau), the Department of Transportation (Bureau), the Department of Agriculture and Rural Affairs (Bureau), the Department of Commerce (Committee), the State-owned Assets Supervision and Administration Commission, the Customs, the Market Supervision Bureau (Committee, Department), the Energy Bureau, and the Supply and Marketing Cooperative in all provinces, autonomous regions, municipalities directly under the Central Government and the Xinjiang Production and Construction Corps, the Railway Bureau Group Corporation, the State Grid Corporation; the China National Petroleum Corporation, the China Petroleum and Chemical Corporation, China National Offshore Oil Group Co., Ltd., COSCO Shipping Group, National Energy Group, China Coal Energy Group Co., Ltd., China Sinochem Group Corporation, China Supply and Marketing Group Corporation, China Agricultural Development Group Co., Ltd.*

2138 Notice of the National Development and Reform Commission and other departments on ensuring the future domestic supply and price stability of fertilizers, issued on 22 September 2021, available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202109/t20210924_1297367.html?code=&state=123 (accessed on 22 August 2023).

What follows is an elaborate set of instructions on how the addressees are expected to ensure the stability of the fertilizers supply:

> *The National Energy Group and China Coal Group shall urge their affiliated coal enterprises to sign long-term contracts with backbone fertilizer production enterprises, and the Energy Administration Departments and Industry and Information Technology Administration Departments in Inner Mongolia, Shanxi, Shaanxi, Xinjiang, Sichuan, Guizhou, Yunnan and other places shall actively guide the key raw material supply enterprises within their jurisdiction* [...] *to do the same so as to ensure the sufficient supply of raw materials to fertilizer production enterprises and price stability. PetroChina, Sinopec, CNOOC and other enterprises shall strictly implement the natural gas supply contracts signed with fertilizer production enterprises* [...]. *Power grid companies in Inner Mongolia, Henan, Shandong, Yunnan and other large fertilizer-producing provinces should give priority to ensuring the supply of electricity used for fertilizer production. Yunnan, Guizhou, Hubei and other provinces that ship phosphate ore to other provinces shall allow enterprises that meet environmental protection and safety production requirements to increase phosphate ore production* [...]. *PetroChina, Sinopec and CNOOC shall give priority to ensuring supply of sulphur used by fertilizer production enterprises for production and keep sulphur's price reasonable and stable.* [...]
>
> *All local Administration Departments of Development and Reform, Industry and Information Technology, and Energy shall give priority to key fertilizer plants with a production capacity of 600,000 tons/year (physical quantity) or more as regards consumption indicators and supply of energy used for the production of fertilizers for the domestic market* [...].
>
> *All local Administration Departments of Transportation shall ensure the smooth transportation of agricultural materials such as chemical fertilizers etc by waterways or by road and accessibility of transportation and distribution vehicles and ships in accordance with epidemic prevention and control regulations. Shipping enterprises shall actively ensure the transportation of imported fertilizers.* [...]
>
> *All State-owned Asset Supervision and Administration Commissions and supply and marketing cooperatives at all levels shall encourage their affiliated fertilizer enterprises to maintain reasonable price difference between produced and imported product sales* [...] *and to maximize the benefits to farmers.*

The concluding section of the Notice contains the instructions on division of tasks, implementation and reporting:

> *The Provincial Development and Reform Commissions shall take the lead in carrying out the work to ensure supply and price stability on the fertilizer market of their constituency*[...] *and shall work together with the Administration Departments of Industry and Information Technology, Finance, Ecological Environment, Transportation, Agriculture, Commerce, State-owned Assets, Customs, Market Supervision, Energy, Supply and Marketing, and Railways to hold regular or one-off consultations* [...] *and actively coordinate to solve the difficulties and problems*

encountered in the production, transportation, sales and use of chemical fertilizers in accordance with the division of duties and responsibilities [...]. *The Provincial Development and Reform Commissions shall report on the situation of the fertilizer market in their constituency and on any relevant work carried out in the previous quarter to the National Development and Reform Commission within 10 working days after the start of the new quarter.*

In November 2021, the Notice was supplemented by an additional set of NDRC instructions issued by means of a notice issued by the General Office of NDRC[2139]. The NDRC instructs relevant authorities, as well as energy enterprises[2140] to "[...] *incorporate the guarantee of energy supply for fertilizer production into the coordination mechanism for the guarantee of coal, electricity, oil and gas transportation, and dulyensure unified planning and overall arrangements, so as to effectively meet the needs for coal, electricity and gas used for fertilizer production, and ensure food and energy security.*" Accordingly, "[c]*oal enterprises shall increase the supply of coal for fertilizer production, strictly honour the already signed contracts, and actively sign additional coal contracts for chemical fertilizers*", "*[r]elevant Economic and Transport Administration Departments as well as power grid enterprises shall* [...] *support fertilizer production enterprises to sign medium- and long-term electricity supply contracts, and effectively ensure the electricity supply to meets the demand of fertilizer production enterprises*" and "[n]*atural gas supply enterprises shall strictly implement the gas supply contracts signed with fertilizer production enterprises, strive to increase the supply of natural gas to chemical fertilizer production enterprises so as to ensure the people's livelihood* [...]" (see also Chapter 12).

While the above measures concerning fertilizers could be called crisis intervention, the synthetic fibres subsector provides an example of targeted central-level policy measures which further develop the existing regulatory framework for the chemical sector, focusing on one of its segments considered by the government to be of particular importance. In April 2022, MIIT and NDRC issued a Guiding Opinion on the high-quality development of the chemical fibre industry ('*Guiding Opinion*')[2141] which seamlessly fit into the overall planning structures described above in Chapter 4 and in Section 16.3.1. The Guiding Opinion – after recalling that the chemical fibre industry represents a core industrial sector for the "*stable development and continuous innovation of the textile industry chain*" which is also "*an industry with global*

2139 Notice of the General Office of the National Development and Reform Commission on guaranteeing coal, electricity and gas for the production of fertilizer, issued on 17 November 2021, available at: www.ndrc.gov.cn/xxgk/zcfb/tz/202112/t20211202_1306704.html?code=&state=123 (accessed on 22 August 2023).

2140 The following entities are listed as direct addressees of the notice: the Development and Reform Commissions, the Economic and Information Commission (Economic and Information Bureau, the Department of Industry and Information Technology), and the Energy Bureau in all provinces, autonomous regions and municipalities directly under the Central Government; the Beijing Municipal Urban Management Commission, China National Railway Group Co., Ltd., China National Petroleum Group Co., Ltd., China Petroleum and Chemical Group Co., Ltd., China National Offshore Oil Group Co., Ltd., National Petroleum Pipeline Network Group Co., Ltd., State Grid Co., Ltd., China Southern Power Grid Co., Ltd., National Energy Investment Group Co., Ltd., and China Coal Energy Group Co., Ltd.

2141 Issued on 12 April 2022, available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/yj/art/2022/art_a01b7532a39a41e891d2540da6981d72.html (accessed on 22 August 2023).

competitive advantage and an important component of the new material industry" – instructs all relevant authorities to "*promote the high-quality development of the chemical fibre industry, form an industrial chain with stronger innovation capacity, higher added value, more security and reliability, consolidate and enhance the competitiveness of the textile industry, meet the consumption demand for better products, and serve the development of strategic emerging industries*" in order to implement the goals of the national 14th FYP, as well as those of the 14th FYP for the High-quality Development of the Manufacturing Industry (see Chapter 4). The specific goals are indeed aligned with those of the national 14th FYP and the 14th FYP on Developing the Raw Materials Industry (see Section 12.2.1.1), that is *(i)* development of new fibre materials towards high-end[2142], *(ii)* digital and intelligent transformation[2143] and *(iii)* green and low-carbon transformation[2144]. Equally, the toolbox to pursue these goals comprises the standard ideas of shaping the corporate structure and regional presence of the industry, combined with providing financial support, in particular to prospective leading enterprises[2145]:

> *Optimize the regional layout. Implement the regional development strategy,* [...] *encourage leading enterprises to build integrated bases for the whole industrial chain of chemical fibre textile in Guangxi, Guizhou, Xinjiang and other central and western regions and form an efficient and coordinated supply chain system with neighbouring countries and regions. Guide chemical fibre enterprises to participate in the construction of transnational industry chains and supply chains, encourage enterprises to improve the global layout of industry chains.* [...]
>
> *Cultivate high-quality enterprises. Encourage enterprises to optimize the allocation of production factors through mergers and reorganizations and accelerate business process reengineering and technological upgrading. Support leading enterprises to pool high-quality resources such as technology, brands, channels and talents, enhance their driving force on the supply chain and provide technology and overall solutions for common use for the apparel, home and industrial textile industries. Support large and medium-sized enterprises to pursue development through collaboration with each other and cultivate specialized new "small giant"[2146] enterprises and "single champion" enterprises.*
>
> *Strengthen policy support and guidance. Accurately define the encouraged and restricted sectors of the chemical fibre industry, and increase support for high-*

2142 See Third Section of the Guiding Opinion. Specific technologies and products include, among others, high performance carbon fibres, aramid fibres and other high performance fibres, such as high performance fibres heat-resistant, creep-resistant, high-strength, high-cutting-resistant, corrosion-resistant, radiation-resistant ultra-high molecular weight polyethylene fibre, special-shaped cross-sectional polyphenylene sulphide fibre, fire prevention and nuclear polyimide fibres, aromatic polyester fibres, bio-based chemical fibre raw materials and bio-based chemical fibres, as well as degradable fibre materials.

2143 See Fourth Section of the Guiding Opinion. Specific products include polyester, nylon, spandex, recycled cellulose fibre and recycled polyester.

2144 See Fifth Section of the Guiding Opinion, which puts emphasis on cleaner production technology and equipment, on recycling technology and on green manufacturing system.

2145 See Second Section, Subsection (2) and (3) of the Guidance.

2146 Concerning the "*little giants*" policy, see Section 2.3.2.

performance fibres, bio-based chemical fibres, recycled chemical fibres and degradable fibre materials. [...]

Increase financial support. Coordinate existing channels and increase support for chemical fibre technology innovation, green development, digital transformation and public services. Guide financial institutions to increase loan support for chemical fibre enterprises in accordance with the principles of controllable risks and business sustainability. [...] *Promote the stock market listing of high-tech chemical fibre enterprises and support qualified chemical fibre enterprises to issue bonds.* [...]

Involve industry associations. Support industry associations to coordinate and promote the implementation of the Guiding Opinion, carry out implementation impact assessments and provide support to government departments. Encourage industry associations to further publish information, guide enterprises' investments and promote the industry's regulated development.[2147] [...]

If implemented as planned by the issuing authorities, the Guiding Opinion would contribute to achieving, by 2025, significant industrial targets in terms of annual added-value growth rate, research and development expenditure, digitalisation and green manufacturing:

By 2025, the industrial added value of chemical fibre enterprises above a designated size shall increase by an average annual rate of 5% and the share of chemical fibre production in the world shall remain basically stable. The innovation capability shall be continuously enhanced, the industry's R&D intensity shall reach 2% and the R&D and manufacturing capacity of high-performance fibres shall meet the national strategic needs. Notable progress shall be made regarding digital transformation [...]. *The green manufacturing system shall be continuously improved* [...]. *A number of leading enterprises with strong competitiveness shall be formed, a high-end, smart and green modern industry system shall be established, and China shall become a chemical fibre powerhouse.*

It has been pointed out, along these lines, that the importance of the synthetic fibres subsector originates in the fact that advanced fibres can be applied in a wide range of areas, including aerospace, high-speed railways, renewable power generation and military equipment. At the same time, China's domestic production accounts for a much lower share of the market than desired by policymakers, with continued challenges to close the technology gap[2148]. These policy considerations help explain not only while synthetic fibres qualify for such specific attention by Chinese authorities but also why they have featured since many years in more general industrial strategy documents, such as in the Decision 40 (see Section 4.2.9), in the National Medium- and Long-Term Program for Science and Technology Development (2006-2020)[2149], in Made in China 2025 (see Section 4.2.3) or in the 13th FYP on the Development of Strategic Emerging Industries[2150].

2147 See Seventh Section of the Guidance.

2148 See MERICS China Industries, May 2022, available at: https://www.merics.org/sites/default/files/2022-05/MERICS%20China%20Industries%20April%202022.pdf (accessed on 22 August 2023).

2149 See p. 173 ff. of the 2017 version of this Report.

2150 See p. 42 ff. of the 2017 version of this Report.

16.3.3. FURTHER REGULATORY MEASURES

The plans and guidelines described above provide for a broad array of interventions including production targets, relocation of industries, development of certain industry segments, various forms of support measures, etc. However, as also apparent from the above reference to longer-term and/or horizontal industrial policy instruments, the regulatory documents aimed specifically at the chemical sector are embedded in a context of wider policies and support instruments which continue to shape the chemical sector in China. Among those, the Made in China 2025 strategy[2151], the use of dedicated GGFs (see Section 6.5.1) and supply of cheap electricity for certain groups of industrial consumers (see Section 10.2.1.2.2) keep playing their role in the development and upgrading of the Chinese chemical sector[2152].

16.4. FINDINGS IN PREVIOUS TRADE DEFENCE INVESTIGATIONS

Concrete market distortions can also be identified in the results of anti-dumping and countervailing proceedings conducted by several jurisdictions in the chemical sector.

In its *Acesulfam* investigation, the Commission pointed out the overlap between the managerial and Party functions of selected individuals, which in turn suggested an increasing level of intervention by Chinese authorities in the sector[2153]. In that investigation, the Commission also identified a number of policy documents and tools illustrating the government's interference with market forces[2154].

In its *Citric Acid* investigation[2155], the Commission found that the Government is actively shaping the corporate structure of the sector, in addition to being present in the market through ownership of a number of SOEs[2156], as well as having significant control over raw materials supply in the sector[2157]. The Commission also identified links to the CCP of individuals in managerial position in a number of companies in the sector, as well as to Party building activities in those companies[2158].

In its *Monosodium Glutamate* investigation[2159], the Commission found that one company had the support of CCP members and local public authorities which coordinated matters of interest

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2151 See also: Hong, S.; Yifan, J.; Xiaosong, L.; Liu, N., cited.

2152 See also Section 16.4. of the 2017 version of this Report.

2153 See Commission Implementing Regulation (EU) 2022/116 of 27 January 2022 imposing a definitive anti-dumping duty on imports of acesulfame potassium originating in the People's Republic of China, following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council; OJ L19, 28.1.2022, p.1, recitals 95-96.

2154 *Ibid.*, recitals 98-99.

2155 Commission Implementing Regulation (EU) 2021/607 of 14 April 2021 imposing a definitive anti-dumping duty on imports of citric acid originating in the People's Republic of China as extended to imports of citric acid consigned from Malaysia, whether declared as originating in Malaysia or not, following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council; OJ L173, 15.4.2021, p.73.

2156 *Ibid.*, recital 94.

2157 *Ibid.*, recital 101.

2158 *Ibid.*, recital 97.

2159 See Commission Implementing Regulation (EU) 2021/633 of 14 April 2021 imposing a definitive anti-dumping duty on imports of monosodium glutamate originating in the People's Republic of China and in Indonesia following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council; *OJ L 132, 19.4.2021, p. 63–107.*

for the company[2160], while another company in the sector explicitly declared to be implementing State policies and CCP ideology in its activities[2161]. The Commission also established significant overlaps between managerial positions and CCP membership/functions among individuals in a number of major players in the sector[2162]. Moreover, public policies with respect to key raw materials were shown to be in place and influencing free market forces[2163]. In addition, a number of companies in the sector were receiving financial support, including in the form of government subsidies[2164].

In the *Sulphanilic Acid* investigation[2165], the Commission found that while one producer had close ties to the CCP, another's production was located in a national chemical park under direct CCP influence[2166]. The Commission further established significant state influence, via state-owned entities, over sulphanilic acid export channels, as well as over raw material inputs[2167]. Moreover, the Commission found personnel overlaps between management bodies of producing and exporting companies and between Party structures[2168]. The Commission also identified concrete public policies, such as individual projects and/or taxation mechanisms, interfering with market forces in the sector[2169].

In their *Sodium Gluconate, Gluconic Acid and Derivative Products* investigation, the US authorities showed[2170] that producers in China benefitted from a range of policies instituted by the Chinese authorities, in particular a reduction in payable taxes, as well as from access to inputs – such as land, water and electricity – at preferential rates. In addition, producers received direct financial support from national and provincial authorities.

Similarly, in the *Glycine* investigation, the US authorities found[2171] a wide range of benefits which the Chinese producers had enjoyed, including preferential loans on a national and provincial level, reductions in income and other taxes, access to land and electricity for less than adequate remuneration.

2160 *Ibid.*, recital 62.
2161 *Ibid.*, recital 63.
2162 *Ibid.*, recitals 69-71.
2163 *Ibid.*, recitals 75-80.
2164 *Ibid.*, recitals 83-84.
2165 See Commission Implementing Regulation (EU) 2021/441 of 11 March 2021 imposing a definitive anti-dumping duty on imports of sulphanilic acid originating in the People's Republic of China following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council; *OJ L 85, 12.3.2021.*
2166 *Ibid.*, recital 60.
2167 *Ibid.*, recitals 61-62.
2168 *Ibid.*, recital 67.
2169 *Ibid.*, recitals 73-77.
2170 See Issues and Decision Memorandum for the Final Affirmative Determination in the Countervailing Duty Investigation of Sodium Gluconate, Gluconic Acid and Derivative Products from the People's Republic of China, 17 September 2021, DoC ITA, C-570-072.
2171 See Decision Memorandum for the Final Affirmative Determination in the Countervailing Duty Investigation of Glycine from the People's Republic of China, 5 January 2019, DoC ITA, C-570-081.

Furthermore, in their investigation concerning *Corrosion Inhibitors*, the US authorities found[2172] that the Chinese producers had access to finance at discounted rates due to existing preferential lending policies, as well as export-related credit, insurance and guarantee programs. Moreover, goods and services were provided to the Chinese producers for less than adequate remuneration, in particular land, electricity, as well as a number of raw material inputs used in the manufacturing process of corrosion inhibitors. The producers further received direct financial support from a number of programs at the national, provincial and/or municipal government level.

Lastly, in their *Pentafluorethane* investigation, the US authorities determined[2173] that Chinese producers had access to a number of government support measures, such as provision of certain raw material inputs, as well as of land and electricity for less than adequate remuneration. The Chinese producers further benefitted from tax rebates, export buyers credits, as well as a number of measures entailing direct financial support received from authorities at various levels of government.

16.5. CHAPTER SUMMARY

The Chinese chemical sector remains one of the building blocks of China's industry, supplying essential inputs for many other key sectors, as well as providing consumer products for individuals.

Due to the sector's importance for both the upstream and downstream ends of value chains, the Chinese authorities have paid particular attention to it. This is apparent from the corporate layout of the sector where significant SOE presence persists, subject also to the ongoing consolidation of central level SOEs (see Chapter 5), exemplified by the Sinochem merger in 2021 (see Section 16.2.4). Moreover, State control is exercised through numerous planning and regulatory documents targeting the chemical sector (see Section 16.3). Some of those policies have been in place for an extended period of time (see Section 16.3.3.) but have been supplemented and updated in the more recent national and sub-national 14th FYPs (see Section 16.3.1). These plans demonstrate the State's influence over the sector. These planning documents, in combination with the ad hoc policy interventions of the Government (see Section 16.3.2), demonstrate that the State not only pursues a certain vision of the chemical sector but that it will step in to make necessary course corrections.

Most importantly, the authorities put an ever-greater emphasis on moving up the value chain, as well on the sector's environmental impact (see Section 16.3.1). The language of the relevant policy documents reflects these priorities by frequent references to "*optimization and structural adjustment*", to "*enhancing technological transformation*" or to "*making leading enterprises bigger and stronger*" on the one hand, as well as to *"improvement of the environmental risk management"* or *"relocation and transformation of hazardous chemical production"* on the

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2172 See Issues and Decision Memorandum for the Final Affirmative Determination of the Countervailing Duty Investigation of Corrosion Inhibitors from the People's Republic of China, 25 January 2021, DoC ITA, C-570-123.

2173 See Issues and Decision Memorandum for the Final Determination in the Countervailing Duty Investigation of Pentafluoroethane (R-125) from the People's Republic of China, 30 December 2021, DoC ITA, C-570-138.

other hand. Irrespective of the nature of the overall priorities, the specific steps plotted to achieve them show that the Chinese authorities continue aiming at comprehensive management of the industry's development, often orchestrated in great detail, down to the level of individual localities, individual products and individual enterprises in terms of output targets, growth levels, etc. (see Section 16.3.2).

Consequently, the industrial policies in the chemical sector remain highly interventionist, with the State ready to deploy a wide range of regulatory tools, including fiscal, financial, investment or pricing measures (see Section 16.3.1). The regulatory documents explicitly request the relevant authorities and other actors – such as banks or industrial associations – to provide the necessary support for the national, regional, etc. industrial policies concerning the chemical sector, most notably by means of increased financial support (see Section 16.3.2). Along these lines, investigation practice of trade defence authorities in recent years has shown that a wide range of support measures for the chemical sector in general or for individual businesses introduced by the Chinese authorities at various levels exist (see Section 16.4), significantly impeding the free functioning of the market as well as company decisions which are therefore not genuinely market driven.

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17.1. INTRODUCTION

The ceramic sector covers two basic types of products. First, a large variety of traditional products that are made from clay and its natural minerals by crushing, mixing, moulding, roasting and other processes. The traditional ceramic products are, for example, wall and floor tiles, bricks and roof tiles, refractories, and daily-use ceramics such as sanitary ware, table and ornamental ware, abrasives, clay pipes, expanded clay and porcelain enamel.

Second, modern advanced applications of ceramics that are of growing importance in different products such as electronics, telecommunications, transportation, optical communication, wireless communication and space exploration. Advanced ceramics can be sub-divided according to their chemical characteristics (oxide ceramics, nitride ceramics, carbide ceramics, boride ceramics, silicide ceramics, fluoride ceramics or sulphide ceramics) or type of use (structural ceramics, tool ceramics, functional ceramics etc.). Since ceramic materials are characterised by high thermal conductivity (crucial in functional ceramics) and are resistant materials (important in structural ceramics), many components of high-tech products include ceramic elements such as circuit carriers, core materials, sensors etc. Multilayer ceramic capacitors ('*MLCC*') and ceramic capacitors are materials used, for example, in chip production and in military products.

Following a brief description of the essential parameters characterising the Chinese ceramic industry, this chapter will look into the relevant regulatory framework and the existing State support measures, and it will further provide an overview of distortions found in previous trade defence investigations.

17.2. THE CHINESE CERAMICS INDUSTRY

17.2.1. PRODUCTION VOLUME AND COST

The 1986-1992 period was marked by significant development of state-owned ceramic enterprises. However, from 1996 onwards, private enterprises became the leading force in the sector and the industry developed overcapacity[2174], not least because the production process utilized ubiquitous raw materials, relatively inexpensive equipment and a relatively simple technological process. In light of these comparatively low barriers to entry to the traditional ceramics industry, the market was easy to enter even for SMEs. This enabled the rapid expansion of the sector, characterized also by a significant presence of SMEs[2175].

Between 1995 and 2014, Chinese ceramic wall and floor tile annual production increased more than six times from 1.6 billion square meters in 1995 to 10.2 billion square meters in 2014 (i.e. 10 times more than the EU's total ceramic tile production)[2176]. China has been the world's largest producer of ceramic tiles since 2015 and home to more than 45% of the world's total production on average[2177]. After 2016, the Chinese production began to contract[2178]. Nevertheless, China's production continued to account for 58% of global ceramic tile

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2174 See at: https://www.chinabaogao.com/detail/600125.html (accessed on 4 September 2023).

2175 See at: https://m.huaon.com/detail/800221.html (accessed on 4 September 2023).

2176 Aegis Europe. (2016). *Press release: European manufacturing industries call on G20 leaders to tackle widespread Chinese overproduction and overcapacities;* available at: https://aegiseurope.squarespace.com/news/press-release-european-manufacturing-industries-call-on-g20-leaders-to-tackle-widespread-chinese-overproduction-and-overcapacities (accessed on 4 September 2023).

2177 Analysis of the current situation of the global and Chinese architectural ceramics industry in 2022: China's production and sales ranked first in the world (Figure) - China Business Intelligence Network; available at: https://m.askci.com/news/chanye/20220808/1510141948117.shtml (accessed on 4 September 2023).

2178 According to an Analysis of the Current Situation and Competition of the Architectural Ceramics Industry: "*from 2017 to 2019, the* [...] *production of building ceramics decreased year by year; in 2018, the output fell below 10 billion m², in 2019 it fell below 9 billion m² and in 2020 it fell again by 8.8%*", available at: https://www.chinabaogao.com/detail/600125.html (accessed on 4 September 2023).

production as of the writing of this Report[2179]. By individual categories of traditional ceramic products, China's production of daily-use ceramics accounts for 70% of the global production, furnishing art ceramics 65%, sanitary ceramics 50% and construction ceramics accounts for 64%[2180]. As to likely future market dynamics, according to the China Construction and Sanitary Ceramics Association's forecast of market demand during the 14th FYP period, the production of construction ceramics would rise to 9 billion square meters by 2025, of which the domestic demand will account for 8.5 billion and exports for the remaining 500 million square meters[2181].

As of the writing of this Report, the sector's decrease in production[2182] appeared to be driven mainly by a shrinking market combined with rising prices for inputs such as natural gas and other raw materials, which resulted in declining profitability[2183]. The Government's push for low carbon development (see for instance Section 4.1, as well as by macro-control of real estate policies[2184] (see also Chapter 6) significantly affected the industry. Coinciding with the publication of the 14th FYP (see Section 4.2.5), various Government policies were introduced to promote energy conservation and support the transformation towards a green ceramic industry[2185].

Unlike traditional ceramic products, the production of advanced ceramics rose steadily and significantly in China in recent years. From 2016 to 2020, the market size of China's electronic ceramics industry grew from RMB 44.9 billion to RMB 76.3 billion[2186]. According to estimates by China Business Industry Research Institute, the industry was to reach RMB 87.6 billion of worth by 2021 and RMB 99.8 by 2022[2187].

17.2.2. Geographical Distribution

In terms of regional distribution, the main production provinces of traditional ceramics are Guandong, Jiangxi, Fujian, Sichuan, Henan, Shandong, Guangxi and Hebei[2188]. Together, they

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2179 See at: https://www.ceramicschina.com/PG_ViewNews_125324.html and at: https://www.indexbox.io/store/world-ceramic-tile-market-analysis-forecast-size-trends-and-insights/ (accessed on 4 September 2023).

2180 See at: https://www.sohu.com/a/300062722_99986028 (accessed on 4 September 2023).

2181 See at: https://www.ceramicschina.net/zhdt/1338670518625747060 (accessed on 4 September 2023).

2182 The decrease concerns different sectors of ceramic production. For example, the total number of construction ceramics production lines decreased from more than 3 400 to 2 760 during the 13th FYP period, with the largest decline in polished tiles of almost two thirds, with 330 fewer production lines. The production lines of interior wall bricks decreased as well, with 188 enterprises leaving the market and production capacity dropping by 19%. Concerning exterior wall bricks, the production capacity decreased by nearly 30%. Moreover, antique brick production lines decreased by 30%. See *Ibid.*

2183 See at: https://www.chinabaogao.com/detail/600125.html (accessed on 4 September 2023), http://www.leadingir.com/datacenter/view/7273.html (accessed on 4 September 2023) and https://www.cccmc.org.cn/spfh/hyzx/ff8080817fd5e25d017fdeaee7c7010b.html (accessed on 4 September 2023).

2184 *Ibid.*

2185 See at: https://www.chinabaogao.com/detail/600125.html (accessed on 4 September 2023).

2186 See at: https://zhuanlan.zhihu.com/p/577366637 (accessed on 4 September 2023), as well as at: http://www.seccw.com/Document/detail/id/8286.html (accessed on 4 September 2023).

2187 *Ibid.*

2188 "*10th National Ceramics Conference and 2020 China Ceramics Brand Conference*", President of the China Building and Sanitary Ceramics Association speech on overall situation of the industry over the past five years of the 13th FYP; available at: https://www.ceramicschina.com/PG_ViewNews_125324.html

account for 80% of the total production capacity in China[2189], with the highest production capacity in Guangdong, followed by, respectively, Jiangxi and Fujian[2190]. In terms of types of construction ceramics manufactured, Fujian ranks first for exterior wall tiles, with Jiangxi, Sichuan and Anhui accounting for a significant part of the roof tiles production[2191].

China's advanced ceramic industry is mainly concentrated in Guangdong, Jiangsu, Shandong and Hunan, Zhejiang, Jiangxi, Henan, Liaoning, with the production centres of structural ceramics concentrated in Guangdong, Jiangsu, Jiangxi, Hunan and Shandong[2192].

17.2.3. OVERCAPACITY

At the outset of the 13th planning period, the sector of construction ceramics was characterised by significant overcapacity, which was also explicitly recognised by the Chinese authorities[2193]. However, during the 13th FYP period, due in large part to China's industrial (see Chapter 12) and investment policies (see Chapter 8), a number of sanitary ceramics, construction ceramics and ceramic brick production facilities[2194] was eliminated from the market. Still, in sanitary and construction ceramics, 14.52% of enterprises of a certain size were loss-making in 2019, up 1.2 percentage point compared to 2018, with 16.47% of loss-making enterprises in construction ceramics only[2195]. Even though the process of transformation, upgrading and consolidation continued throughout the 13th planning period - the number of enterprises above a designated size declined to 1410 in 2015 and to 1048 in 2021 and to 1026 in 2022[2196] - the problem of overcapacity still persists.

In fact, while in 2021-2022 the number of enterprises declined, the actual production capacity increased and 130 new ceramic tile factories have started production in 2021, the largest increase in history[2197]. In 2023, the problem of overcapacity in the Chinese traditional ceramics industry was pointed out by the Ceramics Information Network: "*The overcapacity of the*

(accessed on 4 September 2023). See also: http://www.leadingir.com/datacenter/view/7273.html (accessed on 4 September 2023) and https://www.cccmc.org.cn/spfh/hyzx/ff8080817fd5e25d017fdeaee7c7010b.html (accessed on 4 September 2023).

2189 See at: https://www.cccmc.org.cn/spfh/hyzx/ff8080817fd5e25d017fdeaee7c7010b.html (accessed on 4 September 2023).

2190 Largest production is located as follows: a) Jiangxi: Jingdezhen City, Gao'an City, Fengcheng City, Pingxiang City; b) Guangdong: Foshan City, Chaozhou City, Qingyuan City, Lianjiang City, Heyuan City; c) Fujan: Dehua County, Jinjiang City, Minqing County, Dapu County; d) Jiangsu: Yixing City; e) Hebei: Handan City, Tangshan City, Gaoyi County, Yichang City; f) Shandong: Zibo City, Linyi City; g) Guanxi: Beiliu City; h) Shaanxi: Pingding County, Huairen County, Yangcheng County, Yaozhou County. Data available at: http://taocich.com/?p=209187 (accessed on 4 September 2023).

2191 "*10th National Ceramics Conference and 2020 China Ceramics Brand Conference*". See footnote 13.

2192 See at: https://zhuanlan.zhihu.com/p/267296856 (accessed on 4 September 2023).

2193 See the 2017 version of this Report, p. 439.

2194 In 2018-2019 the number of ceramic production lines in the country decreased by nearly 35% and "since 2021 there have been more than 200 ceramics production lines that have completely withdrawn [...] across the country", see at: https://www.taocixinxi.cn/news-3-15425-0.html and https://www.taocixinxi.cn/news-4-32953-0.html (accessed on 4 September 2023).

2195 See at: https://www.taocixinxi.cn/news-3-15425-0.html (accessed on 4 September 2023).

2196 See at: https://www.sohu.com/a/678476846_121717382 (accessed on 4 September 2023).

2197 Available at : https://baijiahao.baidu.com/s?id=1752828849056583887&wfr=spider&for=pc (accessed on 4 September 2023).

ceramics industry is all-round, and the entire industrial chain is in extreme saturation"[2198]. For example, in the ceramic tile sector, the production capacity in 2022 amounted to 12.5 billion square meters, while the actual output was about 7.3 billion square meters, hence the capacity utilization rate was of around 70%, with the market seriously oversupplied[2199].

Hence, also in the 14th FYP period, the Chinese authorities strive to reduce capacity in sector while pursuing also other goals, such as focusing on more high-end building materials, also with a view to compete internationally. Concerning the 14th planning period, including on the planning and other regulatory tools, see more in Section 17.3.1 below.

17.3. REGULATORY FRAMEWORK

As ceramic products have various consumer and industrial uses, the sector is managed by several different state policy instruments. Important subsets of ceramic goods, in particular ceramic tiles and pipes, are considered construction materials and are therefore covered by the rules pertaining to the raw materials sector in the 14th planning cycle. Another group of ceramic products – namely tableware - falls under the category of light industries. Light industries include also electronics, energy industry, consumer durables, etc. The relevant measures pertaining to these sectors are described below, in particular in Section 17.6.1 concerning the construction ceramics and in Section 17.6.2 for the ceramics falling into the category of light industries. As there is no indication to the contrary, it can be safely assumed that the regulatory provisions which apply to the construction sector or the light industries sector cover also the ceramic sector.

Modern ceramics fall into the category of new materials, and are partially covered by the raw materials regulatory instruments, partially by other instruments, for example by the Zhejiang Province's 14th FYP on the development of the new materials industry[2200], the Jiangxi Province 14th FYP on the high quality development of the new materials industry[2201], the Shaanxi Province 14th FYP on the development of the new materials industry[2202], the Guangdong Province's Several Opinions on the development of the semi-conductors and integrated circuits industry[2203].

17.3.1. THE CENTRAL LEVEL 14th PLANNING CYCLE POLICIES

17.3.1.1. TRADITIONAL CERAMICS PERTAINING TO THE RAW MATERIALS SECTOR

2198 Ceramics Information Network; available at: https://baijiahao.baidu.com/s?id=1765017418798778015&wfr=spider&for=pc (accessed on 4 September 2023).

2199 *Ibid.*

2200 Available at: https://jxj.jiaxing.gov.cn/art/2021/12/29/art_1229399353_4851032.html (accessed on 4 September 2023).

2201 Available at: http://gxw.nc.gov.cn/ncgxw/ghxx/202302/ce5ed04c948d4109aae5b8962c36dcd7.shtml (accessed on 4 September 2023).

2202 See: http://www.shaanxi.gov.cn/zfxxgk/zcwjk/szfbm_14999/ghwb_15010/202208/t20220812_2244723.html (accessed on 4 September 2023).

2203 Available at: http://drc.gd.gov.cn/gfxwj5633/content/post_2903095.html (accessed on 4 September 2023).

In December 2021, the MIIT, MOST, and the Ministry of Natural Resources issued the 14th Raw Materials FYP (see Section 12.2.1.1)[2204]. In order to ensure a proper implementation of this plan, specifically as regards the construction materials sector, in September 2022, the China Building Materials Federation, commissioned by MIIT, issued *the Guidelines on Developing the Construction Materials Industry during the 14th FYP Period* [2205]. The 14th Raw Materials FYP and the guidelines give top-level guidance for the development of the construction materials sector from multiple angles, while the plan contains less specific data and the guidelines provide more details (see also Chapter 4 as concerns the Chinese planning system).

At the outset, the plan praises the past achievements of the raw materials industry, sharing that *"the added value of China's raw materials industry accounted for 27.4 percent of industrial enterprises above designated size in 2020.* [...] *In 2020, 34 of China's raw materials industrial enterprises (excluding Hong Kong, Macao and Taiwan) made it to the list of the world's top 500 enterprises, accounting for 29.1 percent of all shortlisted Chinese enterprises.* [...] [T]*he proportion of R&D investment was lifted from 0.76 percent in 2015 to approximately 0.9 percent in 2020"*[2206].

The 14th Raw Materials FYP acknowledges that the raw materials industry has challenges ahead as "[t]*he excessive surplus of medium and low-end products persists, whereas high-end products are in short supply; the autonomous and controllable level of core process technology and equipment of key materials is not high*; *it remains an arduous task to realize green and low-carbon development;* [...] *and the ability to guarantee critical strategic resources remains inadequate. "*[2207] At the same time, the plan sets out the following goal: "*by 2025, the ability of raw materials industry to safeguard and lead the high-quality development of the manufacturing industry will be significantly boosted"*[2208].

The 14th Raw Materials FYP repeatedly emphasizes accelerating green industrial development, using the term "*green building materials*", and sets out that *"implementation plans for the accomplishment of carbon peaking in the building materials sector will be formulated to ensure carbon emissions peak before 2030"*[2209].

As regards capacities, the 14th Raw Materials FYP specifies that *"newly increased production capacity will be strictly controlled",* it calls for improvement and strict implementation of production capacity replacement policies and local governments are to be encouraged to expand the applicable scope of production capacity replacement in the raw materials industry. Moreover, "[e]*nergy conservation review needs to be implemented to strictly control the thermal coal consumption of major coal consumers, including sectors like building*

2204 Available at: https://www.miit.gov.cn/cms_files/filemanager/1226211233/attach/20226/5a2f85786c23414f8c3594073c7f1d5d.pdf (accessed on 4 September 2023).

2205 Guidelines on Developing the Construction Materials Industry during the 14th FYP Period, available at: http://www.cbmf.org/c/2022/09/06/12672.shtml (accessed on 4 September 2023).

2206 14th Raw Materials FYP, Section I.I.

2207 *Ibid.*, Section I.II.

2208 *Ibid.*, Section II.III.

2209 *Ibid.*, Section V.I.

materials"[2210]. The guidelines also emphasize the strict implementation of the capacity replacement policy, pointing out the need to "*prevent the disorderly expansion of production capacity*", and to "*increase the reduction of inefficient production capacity*"[2211].

With respect to implementation, the 14th Raw Materials FYP provides that *"relevant departments* [...] *shall ensure the implementation of relevant initiatives,* [...] *all localities need to better themselves with this Plan and include the main contents and major projects herein in their primary local tasks."* The plan emphasizes that *"sectoral organizations shall give full play to their role as a bridge between enterprises and the government though providing timely feedback on problems and suggestions on the implementation of the Plan."*[2212] As for the funding the implementation, the plan states that *"the existing funding channels will be made full use of to support major projects involved in the Plan."*, and "[the Government] *will deepen the industry-finance cooperation and leverage the role of the National Industry-Financial Cooperative Platform to provide strong support for projects in line with the Plan by means of financial services and equity investment*"[2213](see also Section 12.2.1.1). Financial institutions are encouraged to provide comprehensive services for raw materials enterprises that have implemented mergers and reorganization as well as transformation and upgrading[2214].

In 2022, the Chinese authorities issued the Building Materials Industry Carbon Peaking Implementation Plan ('*Carbon Peaking Plan*')[2215] which essentially aims to balance economic development and emissions control. Against this background, the Carbon Peaking Plan nominally seeks a structural reform in order to control the overall emissions and improve the use of the resources while strengthening the building materials industry [2216]. Accordingly, during the 14th FYP period, energy consumption and emissions in the ceramics production are expected to decrease while a system for a green and low carbon industry development should be promoted[2217]. The strategy of strengthening the control of total carbon emissions comprises reducing low-efficiency production (those with high energy consumption and large carbon emissions) and the use of high-carbon building materials, as well as improving online and real-time monitoring of the overall carbon emissions. Furthermore, the Carbon Peaking Plan promotes the use of clean and green energy, in particular, by replacing coal with alternative fuels with high calorific value and standardized pre-treatment and/or with renewable energy sources. Finally, the Carbon Peaking Plan envisages building or re-building of 1000 green production lines by 2030 and providing a financial support for this purpose.

In view of the above, the 14th FYP on Developing the Raw Materials Industry and the Carbon Peaking Plan remain in line with the Government's overall goals in relation to industrial policy, i.e. increase companies' sizes and upgrading/modernizing their technology and product range.

2210 *Ibid.*, Section IV.I.
2211 Guidelines on Developing the Construction Materials Industry during the 14th FYP Period, p. 12.
2212 14th Raw Materials FYP, Section VIII.I.
2213 *Ibid.*, Section VIII.II.
2214 *Ibid.*, Section IV.III.
2215 See at: http://www.gov.cn/zhengce/zhengceku/2022-11/08/content_5725353.htm (accessed on 4 September 2023).
2216 *Ibid.*
2217 *Ibid.*

In order to achieve the goal set, the planning documents instruct the relevant authorities to make use of a number of industrial policy tools, ranging from capacity controls to providing financial support (and mobilizing the financial sector to this end).

17.3.1.2. TRADITIONAL CERAMICS BELONGING TO THE LIGHT INDUSTRY SECTOR

For the 14th FYP period, the Chinese authorities did not publish a separate FYP for the light industry. Instead, the development goals for the light industry are incorporated in the 2022 Guiding Opinions on Promoting the High-quality Development of Light Industry issued by the MIIT, MOHRSS, MEE, MOFCOM, and SAMR ('*Guiding Opinions*')[2218]. Like other similar documents, the Guiding Opinions explicitly acknowledge that their objectives are based on CCP's decisions and ideology[2219], they list past achievements and existing problems – such as insufficient supply of high-end products and weak overall innovation ability – and they set out a number of objectives for the development of the sector.

The Guiding Opinions contain the usual language of setting developments goals: *"[…] by 2025, the comprehensive strength of light industry will be significantly improved, the proportion of light industry in gross industrial output will be basically stable, the effect of expanding domestic demand and promoting consumption will be obvious, and the ability the serve the building of a new development pattern and promote high-quality economic and social development will be enhanced"*[2220]. Moreover, during the 14th FYP period, the growth rate of the light industry's added value should be consistent with the average growth rate of the national industrial added value, the profit margin of key industries and the international market share of major products are to remain basically stable, and the quality and efficiency should be significantly improved. In addition, a group of competitive enterprises and advanced manufacturing clusters is to be formed and cultivated, the process of carbon peaking in light industry to be promoted, and a low-carbon development roadmap for industries be drawn up.

In order to achieve these goals, the Guiding Opinions put forward specific measures, including those aimed at improving and modernizing the industrial chain and those aimed at encouraging enterprises to establish and improve the quality management system. Moreover, they set out that enterprises will be encouraged to *"optimize the allocation of production factors such as capital, technology and talents through mergers and reorganizations"* and *"promotion of the formation of world-class manufacturing clusters"*[2221]. The light industry is also supposed to *"go global"*, to improve the added value of products, to consolidate the traditional international market and to open up emerging markets[2222].

Importantly, the Guiding Opinions envisage improving fiscal and financial support policies. Specifically, financial institutions are expected to *"innovate financial services and products, increase support for technological transformation and scientific and technological innovation*

2218 Available at: http://www.gov.cn/zhengce/zhengceku/2022-06/19/content_5696665.htm (accessed on 4 September 2023).

2219 Guiding Opinions, Section 1(1).

2220 Guiding Opinions, Section 1(2).

2221 Guiding Opinions, Section 6(17) and 6(18).

2222 Guiding Opinions, Section 6(20).

of light industry enterprises"[2223]. Meanwhile, local governments are encouraged to improve relevant support policies according to the needs in developing local light industry and enhance development potential.

The Guiding Opinions require the local departments in charge of the industry to "*strengthen overall coordination, strengthen process management, and do a good job in implementation.*" Moreover, in the customary manner, the industry associations are supposed to act as "*a bridge between the government and enterprises, strengthen tracking of the implementation of these* [Guiding] *Opinions,* [and] *guide enterprises to strengthen the construction of self-discipline and creditworthiness systems"*[2224].

In sum, the Guiding Opinions show that the Government steers the development of the light industry, including ceramics.

17.3.1.3. ADVANCED CERAMICS

As of writing, advanced ceramic (see Section 17.1) play a comparatively lower role in the context of this Report. Nevertheless, they represent a sector of growing importance which has also been recognized by the Chinese authorities which included the subsector into a number of policy documents. Following the inclusion of advanced ceramics into the 13th FYP as a component of the field of new materials[2225], advanced ceramics have featured various catalogues, generally classifying them as a sector eligible for government support[2226]. Those catalogues include for example the Guidance Catalogue for the Industry Structural Adjustment (see Section 4.2.9), the Guiding Strategic Emerging Industries Key Product and Services Catalogue[2227] or Guidelines for the Development of Key Common Technologies for Industry[2228]. Advanced ceramics are also among the sectors included in Made in China 2025[2229] and classified among the SEIs[2230] (see also Sections 4.2.1 and 4.2.3, including the overlap of Made in China 2025 with the SEI), given China's focus on developing strategic sectors in which advanced ceramics represent a component, such as IT, high-end equipment, new materials or new energy[2231].

Advanced ceramics continue to feature also in the policy documents guiding the economic development during the 14th planning cycle. In the 14th FYP (see Section 4.2.5), advanced ceramics are considered in the context of China's goal to "[a]*ccelerate the development of a modern industrial system and consolidate and strengthen the foundation of the real*

2223 Guiding Opinions, Section 7(21).
2224 Guiding Opinions, Section 7(25).
2225 See 13th FYP, Chapter VI, Section 1.
2226 See Section IX.5, available at https://www.gov.cn/xinwen/2019-11/06/5449193/files/26c9d25f713f4ed5b8dc51ae40ef37af.pdf (accessed on 4 September 2023).
2227 See Section 3.1.2, available at: https://www.ndrc.gov.cn/xxgk/zcfb/gg/201702/t20170204_961174.html (accessed on 4 September 2023).
2228 Available at: https://www.gov.cn/xinwen/2017-10/30/content_5235348.htm (accessed on 4 September 2023).
2229 See Made in China 2025, Chapter 3, Section 5 and Section 6(9).
2230 Strategic Emerging Industries Classification is available at: https://www.gov.cn/zhengce/zhengceku/2018-12/31/content_5433037.htm (accessed on 4 September 2023).
2231 See at: https://baijiahao.baidu.com/s?id=1738223749331109227&wfr=spider&for=pc (accessed on 4 September 2023).

economy"[2232]. More specifically, as part of the objective to increase the country's manufacturing core competitiveness, the 14th FYP envisages that China „*will promote breakthroughs in advanced metals and inorganic non-metallic materials such as high-end rare earth functional materials, high-quality special steels, high-performance alloys, high-temperature alloys, high-purity rare metal materials, high-performance ceramics, and electronic glass; strengthen the R&D and application of carbon fibre, aramid fibre, and other high-performance fibres and their composite materials and bio-based and biomedical materials* [...]"[2233].

Moreover, according to the 14th Raw Materials FYP, China is "*going to develop a range of key materials, including high-temperature alloy, aviation light alloy materials, ultra-high-purity RE metals and compounds, high-performance special-purpose steel, degradable biomaterials, special-purpose coating, photoresists, targets, polishing solution, industrial gas, biomimetic synthetic rubber, intraocular lens, high-performance glass with special functions, advanced ceramic materials, special-purpose separation film, and high-performance RE magnets, catalysts, optically functional materials and hydrogen storage materials*"[2234]. To achieve this goal, China would "*set up manufacturing innovation centres for high-end polyolefin, rare metals, powder metallurgy, advanced glass and advanced ceramics*"[2235].

17.3.2. Provincial and Local Level 14th Planning Cycle Policies

Following up on the 14th Raw Materials FYP, provincial authorities issued local plans, providing development strategies to achieve specific objectives in the ceramics industry. The sector is further regulated at the municipal level through various policy instruments, which also follow national planning provisions. The local plans reflect the goals of the national plan, such as consolidation and modernisation of the ceramics industry, promotion of a technological upgrade and a move towards a more ecological industry and encompass the usual toolbox of industrial policies.

The degree of ceramic industry management by State authorities at all levels is exemplified below using the examples of the following provinces and municipalities: Shandong, Chongqing, Fujian and Chaozhou City in Guangdong.

17.3.2.1. Shandong

Traditional ceramics

The 14th FYP for the Development of the Building Materials Industry in Shandong Province ('*Shandong Plan*')[2236] was published on 17 November 2021 by the Shandong Provincial Department of Industry and Information Technology. It starts by listing the achievements during the 13th FYP period, during which the building materials industry in the province "*resolutely eliminated backward production capacity, resolutely transformed and upgraded*

2232 See 14th FYP, Part III.
2233 See 14th FYP, Article VIII, Table 4.
2234 See 14th Raw Materials FYP, Chapter II, Section III, Feature 2.
2235 *Ibid.*
2236 Available at: http://gxt.shandong.gov.cn/art/2021/12/1/art_103885_10300062.html (accessed on 4 September 2023).

traditional innovation drive [...] *continued to expand industrial scale, steadily improved the economic benefits, and has provided important support for the economic and social development of the province"*[2237]. At the same time, the Shandong Plan admits that there are still many problems such as overcapacity of building material products, weak supporting role of emerging industries, insufficient extension of the industrial chain, and the need to improve innovation capabilities: *"The structural contradiction of the supply side of the building materials industry in Shandong province is prominent,* [...] *and it is urgent to develop new technologies* [...] *to build high-end brands to meet the market demand for building materials products"*[2238].

The Shandong Plan also stipulates detailed quantitative targets, which are not included in the 14th Raw Materials FYP. The Shandong Plan envisages that *"by 2025, the output value of the building materials industry will reach RMB 700 billion, the output value of the top 10 building materials enterprises will account for 30% of the total industry, one 100-billion-level enterprise will be cultivated, five 10-billion level industrial clusters will be built* [...]"[2239].

The Shandong Plan also specifies development priorities for the construction ceramics industry. It aims to strengthen selected construction ceramics production bases and support construction of a number of innovation demonstration parks. Furthermore, key enterprises of construction ceramics are encouraged to establish an enterprise brand management quality system. Promoting the application of new technologies and processes, as well as developing new ceramics and functional ceramics are also listed as development priorities for the construction ceramics industry.

One of the key tasks for the building materials industry in Shandong is to strengthen the international competitiveness of its enterprises in the sector. In order to achieve this, the Shandong plan envisages to *"deepen the "One Belt, One Road" economic and trade cooperation,* [...] *actively expand foreign trade, focus on promoting the export of* [...] *construction ceramics,* [...] *encourage powerful building materials enterprises to build overseas cooperation projects, and focus on driving cooperation in construction engineering, building materials, labour services, technology and capital,* [...] *improve the efficiency of resource allocation, and enhance the national competitiveness of Shandong's building materials industry"*[2240].

The Shandong Plan further calls for increased fiscal and tax support for the industry, in particular the implementation of national fiscal and taxation policies, such as the additional deduction of enterprise R&D expenses, and the reduction of value-added tax and income tax for building materials products with comprehensive utilization of resources. In addition, Shandong's authorities will *"improve financial support policies, encourage all kinds of financial institutions to give credit support to qualified building materials projects, increase financing support for mergers and acquisitions,* [...] *actively develop financial leasing and supply chain financial services, and expand the financing scale for high-growth small and*

2237 Shandong Plan, Chapter 1.
2238 *Ibid.*, Chapter 2.
2239 *Ibid.*, Chapter 3.
2240 *Ibid.*, Chapter 5.4.

medium-sized building materials enterprises"[2241]. The Shandong Plan also requires relevant authorities to *"enhance implementation efforts, improve the coordination and promotion mechanism, formulate work plans* [...] *and clarify roles and responsibilities."* Accordingly, SOEs, private enterprises and SMEs are encouraged to deepen cooperation alongside the industrial chain and supply chain[2242].

In sum, the Shandong Plan reflects many of the mechanisms and targets of the 14th Raw Materials FYP but also sets concrete output targets and development objectives for the construction ceramics industry as well as puts an emphasis on international expansion and deepening cooperation between enterprise.

Advanced ceramics

In 2021, Shandong released the *Action Plan for the High-quality Development of New Materials Industry*[2243] with a focus on key industrial sectors such as carbon fibre and advanced ceramics. This plan expects local authorities to attract a number of projects of strong industry chains or industry chain extensions, map out the bottlenecks concerning products and key core technologies and expand industry chain coordination and innovation.

The 14th Five Years Plan (2021-2025) for the Chongqing region was issued on 19 July 2021 by the Chongqing Municipal People`s Government. The Chongqing Plan (see Section 12.2.2.5) guides the development of the modern industrial system and advanced manufacturing centres, setting a strategic focus on certain sectors including ceramics. It not only covers the 2021-2025 period but also looks forward to 2035.

The Chongqing Plan specifies that one of the guiding principles should be the combination of an effective market and a government-led industry. This is reflected in the following objectives: "[g]*iving full play to the decisive role of the market in resource allocation* [...]*; better involve the government, make sure the government's coordination and control work focusses on systematically fostering an environment favourable to the industry development, on improving the quality of public services, on maintaining market order and on driving consumer demand* [...]." Furthermore, the Chongqing Plan underlines the need to reduce manufacturing costs and to *"optimis*[e] *the supply system of the manufacturing industry"*. In other words, it aims to regulate production factors. The Chongqing Plan also emphasizes the importance of the synergy between the consolidation of the industrial foundations and the modernization of the industrial chain, as well as the promotion of the development of large and small-sized enterprises. Moreover, the Chengdu-Chongqing economic circle is highlighted as an aera to ensure a coordinated development of manufacturing industries. Moreover, the Chongqing Plan mentions the principle of stimulation of the potential growth of new industry models, for instance through the creation of *"Smart Manufacturing Towns"*[2244].

2241 *Ibid.*, Chapter 6.2.
2242 *Ibid.*, Chapter 6.3.
2243 See at: https://baijiahao.baidu.com/s?id=1715843812977892207&wfr=spider&for=pc (accessed on 4 September 2023).
2244 *Ibid.*, Section 2(2).

According to the Chongqing Plan, the municipality benefits from a series of strategic opportunities, such as its location in the rapidly developing area of Southwest China, its involvement in crucial domestic and international trade channels, or its position at the forefront of technological transformation. The Chongqing Plan states that these factors played a key role in the development of a digitalized industrial production process and determined the growth of Chongqing manufacturing industry, including the ceramics sector[2245]. Despite these strengths, the Chongqing Plan observes that the industry finds itself facing several challenges. The production processes are becoming more and more complex, whilst the enterprises' innovation capability is weak and investments are insufficient to promote a transitional process.

In light of this, the Chongqing Plan considers the forthcoming years as crucial to the future of Chongqing`s manufacturing industry and the CCP Central Committee "*requires Chongqing to put the high-quality development of the manufacturing industry in a more prominent position*"[2246]. With the overall purpose of extending the potential of Chongqing`s manufacturing industry, the Chongqing Plan therefore lists specific goals. Particularly, it sets out the creation of internationally competitive industrial clusters and it underlines the need for improving high-quality products manufacturing, enhancing the efficiency of the industry through "*in-depth innovation of institutional mechanisms and enterprise management*"[2247].

The Chongqing Plan also provides for the promotion and application of "*intelligent technology*" and *"raw material management equipment"*. More precisely, it promotes the improvement of a "*green manufacturing system*" and "*mutual supply of raw materials*" as well as the "*sharing of resources*." With the aim of implementing intelligent technological and process equipment, the Chongqing Plan considers R&D as a key factor in order to create high-quality development regional poles of the manufacturing industry[2248].

In addition, a major focus of the plan is on SOEs. The Chongqing Plan promotes the reform of and support to SOEs in the manufacturing industry and encourages investing of state-owned capital in SEIs and advanced manufacturing sector[2249].

Overall, the Chongqing Plan identifies two milestones: one short-term and one longer term. First, it envisages that, by 2025, the manufacturing industry should be consolidated, its scale expanded and the region`s GDP stable. Moreover, it sets out that the industrialization level will be advanced and the industrial chain will be effective. Second, it aims at creation, by 2035, of a *"nationally important advanced manufacturing centre"*, which will contribute to strengthening the international competitiveness and influence of the municipality's manufacturing industry. The Chongqing Plan also envisages establishing of 20-30 manufacturing innovation centres and 50 platforms supporting industrial innovation in industrial parks in order to enhance innovation capability[2250].

2245 *Ibid.*, Section 1(2).
2246 *Ibid.*, Section 2(1).
2247 *Ibid.*, Section 2(3).
2248 *Ibid.*, Section 4.
2249 *Ibid.*, Section 5(2).
2250 *Ibid.*, Section 2(4).

In sum, the Chongqing Plan demonstrates the ongoing active involvement of the Government in setting goals for the manufacturing industry and operational steps to achieve these goals. The industry is led and supported by local authorities, which promote its consolidation and modernisation in different ways. Particularly, as stated above, the Chongqing Plan sets the focus on enterprises' innovation capability and the involvement of state-owned capital to this end.

17.3.2.2. FUJIAN

The Fujian Plan (see Section 12.2.2.4), issued by the People's Government of Fujian Province in June 2021, covers the planning period of 2021-2025.

The Fujian Plan identifies the manufacturing industry as a basis of a strong economy and emphasizes the need for its consolidation and modernization in the province. Particularly, it aims at promoting efficiency and core competitiveness of the industry against the background of current challenges, such as existing significant instability and uncertainty, weak innovation and technological capability of enterprises and investments inadequate to ensure the strengthening and optimization of the industrial chain.

The Fujian Plan considers the current situation as an opportunity to be seized in order to provide strategic coordination both at provincial and local level and to support and promote the transition of the industry towards green and sustainable development driven by innovation[2251].

To achieve these goals, in a short-term perspective, the Fujian Plan sets out the goal of strengthening the industry through further optimization of its structure. Furthermore, it underlines the importance of traditional industries and a specific focus is set on building materials, setting out the goal that by 2025, the total output value of the building material industry should account for RMB 620 billion. The achievement of this aim is to be supported by the promotion of advanced and intelligent technologies, such as automatic quality inspection. The Fujian Plan also stipulates that this transitional process will be also supported by an accelerated research in special ceramic materials[2252].

Moreover, the Fujian Plan envisages gradual transfer of industries from the coast to the mountains, to "*accelerate the revitalization of industries in old revolutionary base areas and Soviet areas*" and boosts inter-provincial cooperation[2253].

17.3.2.3. CHAOZHOU

The municipality of Chaozhou is an important manufacturing base for the Chinese ceramic sector, being the country's lead production location of daily-use ceramics, sanitary ceramics and electronic ceramics. Chaozhou is home to more than 6 000 ceramics manufacturers, which generated more than RMB 50 billion in 2021[2254].

2251 *Ibid.*, Chapter I, Section Two.

2252 *Ibid.*, Chapter III, Section Building Materials.

2253 *Ibid.*, Chapter IV.

2254 Available at: http://www.chaozhou.gov.cn (accessed on 4 September 2023). An introduction to the current situation of Chaozhou's ceramics industry is available at: http://www.chaozhou.gov.cn/zwgk/jytabl/content/post_3822699.html (accessed on 4 September 2023).

In April 2018, the Chaozhou Government issued the Implementation Plan for Promoting the High-quality Development of the Ceramic Industry in Chaozhou City ('*Chaozhou Implementation Plan*')[2255] in order to accelerate the transformation and upgrading of the city's ceramic industry and promote the high-quality development of advantageous traditional industries.

The Chaozhou Implementation Plan envisages several measures to achieve that goal:

- bringing some corrections[2256] to the porcelain clay market and improving the supply of raw materials;
- creating an innovation platform and gathering innovation resources;
- strengthening industry-university-research cooperation and accelerating technological innovation;
- improving industrial design and developing cultural creativity;
- implementing brand strategy and strengthening publicity and communication;
- developing industrial tourism and shaping the impression of porcelain capital;
- compiling price indexes and grasping market dynamics;
- accelerating construction of the gas grid and reducing gas costs;
- strengthening pollution control and promoting cleaner production.

The Chaozhou Implementation Plan requires the municipal authorities to *"rationally guide the allocation of resources, improve the market's ability to allocate resources, and guide the city's ceramic industry to accelerate the elimination of backward production capacity"* and to *"strengthen the cooperation with provincial price associations"*[2257]. In order to reduce overcapacity, the Chaozhou Implementation Plan asks to *"promote the structural reform of the supply side of the ceramic industry,* [...] *urge enterprises to adopt advanced production technology and equipment, and accelerate the elimination of high-pollution and high-emission production capacity"*[2258].

The implementation is to be planned, coordinated and overseen by a special working group led by a vice mayor. Accordingly, *"*[a]*ll county and district governments and relevant municipal departments should formulate specific work plans according to the implementation plan and division of responsibilities, quantify and decompose development goals, and do a good job in the implementation of specific tasks."*[2259] Furthermore, "[f]*iscal and taxation policies and financial reward and subsidy projects enabling governments at all levels to support the transformation and upgrading of the ceramic industry shall be fully implemented"*[2260].

2255 Available at: http://www.chaozhou.gov.cn/attachment/0/429/429010/3418060.pdf (accessed on 4 September 2023).

2256 Those corrections are likely to entail e.g. interventions into the corporate layout of the sector, given the *Chaozhou Implementation Plan's references to "planning the [] clay mining in a reasonable and orderly manner",* as well as to the need to *„carry out in-depth actions to control the chaotic phenomenon of China clay mining".*

2257 The Implementation Plan, Section III.7.19.

2258 *Ibid.*, Section III.8.22.

2259 *Ibid.*, Section III.6.17.

2260 *Ibid.*, Section IV.3

Furthermore, the Chaozhou City adopted an Action Plan for Building a Hundred-billion-yuan Level Ceramic Industry Cluster[2261] ('*Chaozhou Action Plan*') to further promote its ceramic industry and enhance the influence of the Chaozhou ceramics regional brand. The Action Plan sets out that by 2025 *"the scale of the city's ceramic industry will be further expanded, a group of leading enterprises with international and domestic influence will be formed, and the total industrial output value will reach RMB 100 billion."* The authorities plan to have more than 1 000 enterprises of which more than 300 with an output value exceeding RMB 100 million and more than 100 national high-tech enterprises. In addition, Chaozhou strives to *"have more than 50 provincial-level engineering technology research and development centres and more than 50 provincial-level technical service centres for ceramic enterprises"*[2262].

The industrial layout is to be further steered into optimisation through the concentration of the industry. To that end, the government intends to provide support to a range of larger competitive flagship companies. The latter, also called 'backbone' companies, will benefit from a "*one company – one policy*" approach by the government, which translates into tailored policies for each such enterprise, including State support. Mergers and reorganizations of enterprises are also to be encouraged to enhance their overall competitiveness.

In the context of technological innovation and transformation, the plan stipulates to *"strengthen the dominant position of enterprises in technological innovation and promote the construction of research and development institutions of ceramic enterprises* [...] *to create a number of major innovation platforms"*[2263].

Like the Chaozhou Implementation Plan, the Chaozhou Action Plan also seeks to "*establish a ceramic price index and cost index analysis mechanism,* [...] *understand the market dynamics of the ceramic industry and products through the cyclical fluctuations and changing trends of the price index, reasonably guide the allocation of resources, and improve the market.*[2264]"

For the purpose of innovating the industry's marketing model, enterprises are to cooperate with well-known e-commerce enterprises such as Alibaba, Jingdong Group and AsiaBT. Enterprises are also supposed to be guided to continuously innovate multi-channel sales models, and actively expand the domestic and foreign markets of the Chaozhou ceramic industry.

As in other planning documents, in the Chaozhou Action Plan the authorities undertake to make use, at all levels, of all available support measures, including fiscal and taxation tools to implement the Action Plan. Prices of water, electricity and gas shall be appropriately adjusted for the ceramic industry enterprises. The Chaozhou Action Plan envisages the use of price policies to help enterprises reduce production cost and to *"guide financial institutions to optimize and adjust capital investment, expand the scale effect and leverage effect of the loan risk compensation fund for micro, small and medium-sized enterprise, increase support for ceramic enterprises, and provide high-quality financial products and services for enterprise*

2261 See the Chaozhou Municipal Government Notice 2020/203, available at: http://www.chaozhou.gov.cn/attachment/0/491/491711/3688965.pdf (accessed on 4 September 2023).

2262 The Action Plan, Chapter 1.

2263 *Ibid.*, Chapter 3.

2264 *Ibid.*, Chapter 3.20.

mergers and acquisitions, integration of upstream and downstream resources, capital increase and production expansion"[2265].

In sum, the Chaozhou Implementation Plan and the Chaozhou Action Plan cover in detail almost all aspects of the ceramic industry's development, particularly in terms of fiscal and taxation support, capacity reduction and setting of input prices, thus showing a high degree of government involvement in the sector.

17.4. FURTHER POLICIES RELEVANT TO THE CERAMIC SECTOR

Beside the planning documents guiding the development of the sector, a number of additional policies applicable to the ceramics industry are in place, reflecting the priorities of the Chinese authorities, be it for larger industrial segments (see also Chapter 4) or more specifically for the ceramics sector. The following can be pointed out for illustration:

- Guiding Catalogue for Industrial Development and Transfer (2018 Edition)[2266] with its emphasis on shaping the geographical distribution of the industry (see also Section 17.2.2);
- Guiding Opinions on Promoting the Orderly Transfer of Manufacturing Industries (2021)[2267] containing additional provisions on distribution and upgrading of the manufacturing industry sector;
- Guiding Catalogue for Industrial Structure Adjustment (see Section 4.2.9) with updated criteria between technologies to be encouraged, to be restricted and to be eliminated within the ceramics sector[2268].

17.5. STATE SUPPORT MEASURES

As described above, the planning documents and other policy measures governing the ceramic sector in China allow for broad institutional and financial support to Chinese producers, notably to implement various industry development objectives. The ceramic industry, like many others, has benefited from numerous schemes related to various aspects of its activity.

This section lists certain support mechanisms which exist over and above the those envisaged in the national, provincial and local FYPs described above (see Sections 17.3.1 and 17.3.2).

For instance, under its 2022 Interpretation of Policy Measures to Support the High-quality Development of Advanced Ceramic Materials Industry Cluster[2269], the Hunan provincial authorities provide a wide range of support measures to the advanced ceramics sector, related to industrial upgrade, geographical distribution, international expansion etc.:

2265 *Ibid.*, Chapter 4.2.

2266 See at: http://www.gov.cn/zhengce/zhengceku/2018-12/31/content_5435564.htm and https://www.gov.cn/gongbao/content/2022/content_5682412.htm?eqid=ca07dc8c0000d23400000006645b6fb7 (accessed on 4 September 2023).

2267 See at: http://www.gov.cn/zhengce/zhengceku/2022-01/15/content_5668321.htm (accessed on 4 September 2023).

2268 See e.g., Sections 1.12.4, 1.19.6. or 2.9.2. of the Catalogue.

2269 See at: http://gxt.hunan.gov.cn/xxgk_71033/zcfg/zcjd/202209/t20220927_29018884.html (accessed on 4 September 2023).

(1) Accelerate the development of industrial clusters. [...] *Strive to build a dual-core agglomeration of Zhuzhou (Liling) and Loudi (Xinhua) ceramic industries, and multi-point agglomeration in Zhuzhou Economic Development Zone, Loudi Economic Development Zone, Changsha Wangcheng District, Huaihua City, Liling Economic Development Zone and other areas to achieve the agglomeration and development of characteristic ceramic industry.*

(2) Increase support for high-quality enterprises. Continuously improve the service system of small and medium-sized enterprises, promote the development of small and medium-sized enterprises in the direction of "specialized, refined, special and new" and cultivate a number of "little giant" enterprises and single champions and hidden champions [...].

(4) Accelerate the rebuilding of the industrial base. Provide financial and policy support to the ceramic industry in terms of key products, R&D awards [...].

(5) Accelerate the upgrading of the supporting level of the advanced ceramic industry chain. Increase support for the research and development of high-performance ceramic powder materials to ensure the stable and safe supply of ceramic raw materials. Support the construction of large databases and information service platforms. Support the introduction and cultivation of supporting enterprises in the ceramic industry.

(6) Accelerate the promotion of intelligent upgrading. Promote the deep integration of the digital economy and the ceramic industry, guide enterprises to migrate to the cloud platform [...]. *Support the creation of a number of intelligent manufacturing benchmarking workshops and benchmarking enterprises, and give financial support.*

(7) Accelerate green development. Build an efficient, clean, low-carbon and circular green manufacturing system around green factories, green products, green parks and green supply chains. Carry out "low-carbon and zero-carbon" pilot work in the field of advanced ceramics industry and provide financial support to carbon emission reduction benchmark enterprises. [...]

(10) [...] *Promote economic, trade and cultural exchanges between ceramic enterprises and relevant units in countries along the "Belt and Road", encourage the introduction of foreign investment, support ceramic products to expand foreign trade channels, promote exchanges and publicity of ceramic industries in various places, and vigorously develop the ceramic exhibition economy.*

Further incentives are available under the VAT rebate policy where Chinese exporters of ceramic tiles and ceramic sanitary ware can benefit from a 13% VAT rebate[2270]. As specified above (see 15.5.2.2), China has been using such rebates to intervene in the market with the aim to achieve industry policy objectives.

Multiple examples of additional support mechanisms have been identified and some of them are listed below:

2270 See at: http://hd.chinatax.gov.cn/nszx/InitChukou.html (accessed on 29 June 2023).

- The Jingdezhen Municipality (Jiangxi) adopted the "Jingdezhen Advanced Ceramic Industry Development Plan (2022-2025)"[2271] aiming at further developing ceramics application in communication electronics and new energy sectors and at fostering new applications in aerospace, biomedicines etc, and seeking to attract advanced ceramics projects. For instance, the Municipality has developed the Jingdezhen Ceramic Industry Park focussing on fostering advanced ceramics, daily-use ceramics and art ceramics and developing an ecosystem gathering the government, enterprises and universities[2272]. In 2022, the Park attracted 14 advanced ceramics projects, totalling RMB 12 billion investment and 42 advanced ceramics enterprises accounting for RMB 3.7 billion output value. In 2023, the Park's advanced ceramics industry output was expected to reach RMB 8.5 billion output value.
- The Tongchuan Municipality (Shaanxi) issued early 2022 "Measures to foster the development of the advanced ceramic industry"[2273] expanding the support granted to industry investment projects in the field of ceramics in the form of various bonuses according to the projects' performance, energy price subsidisation, technological transformation support, preferential lending etc. In its 2023 work report[2274], the Tongchuan Municipality acknowledged that the upgrading and transformation of the advanced ceramics industry was going forward.
- In October 2022, the Jiangxi Development and Reform Commission released the second batch of provincial key projects[2275], totalling 115 projects with a total investment of RMB 241.5 billion and a planned annual investment of RMB 44.2 billion. Among these 115 projects, it is worth mentioning the Jiangxi Dinghua Xintai project with an annual output of 3.6 million ceramic boards.

17.6. FINDINGS IN PREVIOUS TRADE DEFENCE INVESTIGATIONS

The significant overcapacity in the Chinese ceramic sector and a slower development of domestic demand has led Chinese producers to focus increasingly on export markets. At the time of writing this Report, a number of jurisdictions either initiated trade defence investigations or already adopted trade defence measures against ceramic tiles originating in China.

According to regular WTO filings, besides the EU, the following countries maintain anti-dumping duties on ceramics products from China: Argentina, Brazil, Mexico, India, countries

2271 See at: http://jx.people.com.cn/n2/2023/0805/c190181-40520627.html (accessed on 4 September 2023).
2272 See at: https://jxjdz.jxnews.com.cn/system/2023/07/16/020148697.shtml (accessed on 4 September 2023).
2273 See at: https://www.sohu.com/a/515871065_121095469 (accessed on 4 September 2023).
2274 See at: http://district.ce.cn/newarea/roll/202303/17/t20230317_38449223.shtml (accessed on 4 September 2023).
2275 See at: https://www.sohu.com/a/592342175_120109837 (accessed on 4 September 2023).

of the Gulf Cooperation Council, the US, Taiwan, Korea, the UK[2276]. Moreover, the US have in place countervailing duties against Chinese ceramic tiles[2277].

In the EU, several anti-dumping investigations resulted in the imposition and renewal of two trade defence measures on imports of ceramic goods originating in China, i.e., ceramic tiles and ceramic tableware and kitchenware. In both cases, market distortions were found.

17.6.1. CERAMIC TILES CASE

In September 2011, the EU imposed a definitive anti-dumping duty on imports of ceramic tiles originating in China with the duty levels applied ranging from 13.9% to 69.7%[2278]. On 13 September 2016, the Commission initiated a first expiry review of the measures which resulted in maintaining the measures[2279]. On 22 November 2022, the Commission initiated an expiry review of the measures[2280]. The investigation is ongoing as of writing of this Report.

The initial investigation established that the business licence of a group of exporting producers encompassed an export sales restriction, which was found to be applied in practice. It was therefore considered that sales decisions were not taken freely but were subject to significant State interference. Moreover, the Chinese producers were not able to demonstrate that they had paid for their land use rights. The latter element points to a distortion of an important input factor. Additionally, it was found that two groups of producers were not able to demonstrate the origin of the initial capital used in the companies' establishment, i.e. another distortion of a factor of production[2281].

17.6.2. CERAMIC TABLEWARE AND KITCHENWARE CASE

In May 2013, the EU imposed a definitive anti-dumping duty on imports of ceramic tableware and kitchenware originating in China with the duty levels ranging from 13.1% to 36.1%[2282]. On

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2276 See at the WTO anti-dumping notifications portal, available at: https://www.wto.org/english/tratop_e/adp_e/antidum3_e.htm (accessed on 4 September 2023).

2277 See at the WTO countervailing measures notifications portal, available at: https://www.wto.org/english/tratop_e/scm_e/notif_e.htm#:~:text=1.,-Other%20optional%20notifications&text=Notifications%20of%20Countervailing%20Legislations,or%20regulations%20should%20so%20notify (accessed on 4 September 2023).

2278 Council Implementing Regulation (EU) No 917/2011 of 12 September 2011 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of ceramic tiles originating in the People's Republic of China (OJ L 238, 15.9.2011).

2279 Commission Implementing Regulation (EU) No 2017/2179 of 22 November 2017 imposing a definitive anti-dumping duty on imports of ceramic tiles originating in the People's Republic of China following an expiry review pursuant to Article 11(2) of Regulation (EU) 2016/1036 of the European Parliament and of the Council (OJ L 307, 23.11.2017, p.25).

2280 Notice of initiation of an expiry review of the anti-dumping measures applicable to imports of ceramic tiles originating in the People's Republic of China, (OJ C 442, 22.11.2022 , p.3).

2281 Commission Regulation (EU) No 258/2011 of 16 March 2011 imposing a provisional anti-dumping duty on imports of ceramic tiles originating in the People's Republic of China (OJ L 70, 17.3.2011, p.5).

2282 Council Implementing Regulation (EU) No 412/2013 of 13 May 2013 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of ceramic tableware and kitchenware originating in the People's Republic of China (OJ L 131, 15.5.2013).

12 July 2019, following an expiry review, the Commission maintained the definitive anti-dumping duty on imports of ceramic tableware and kitchenware originating in China[2283].

State intervention was found to exist already in the original investigation with regard to the purchase of land use rights, the purchase of raw materials and with regard to a company's recruitment process, which demonstrates that business decisions were not made in response to market signals, without State interference and that costs did not reflect market values[2284]. The expiry review investigation did not find any decrease of such State interference.

17.7. CHAPTER SUMMARY

The construction ceramics and daily-use ceramics are traditional sectors of the Chinese industry. The State has been closely overseeing, steering and managing their development since many decades. Advanced ceramics, being an important upstream sector for the high-tech industries, is also covered by various Government policies. As in the case of other key sectors, this State involvement is visible through the system of planning documents issued at all levels – from national to municipal. One important element that the State pushes in this context is the concentration of ceramic industrial clusters. This often translates into government requirements to develop large competitive conglomerates and enterprises are also directed to 'reach out' for foreign sales markets. Such consolidation would also facilitate greater control of the sector in order to implement government policies.

Compared to the 13th FYP period, the national level regulatory framework of the 14th FYP period focuses on more general aspects of the ceramics sector. However, regional and local plans provide detailed and specific targets, concerning, for example, industrial output, geographical distribution and value-chain positioning of the sector and R&D expenditure. Pursuing such targets is part of wider policies aimed at consolidation and modernization of the industry, with which businesses and the relevant implementing authorities are supposed to comply. The financial support from the various state levels may take the form of financial transfers (available under individual policy measures), preferential loans, export incentives, tax relieves and land-use cost relief, etc. In turn, these policies and the support related to them have direct and indirect consequences on the prices of inputs and hence on cost structures of companies, leading to significant market distortions in the sector.

2283 Commission Implementing Regulation (EU) 2019/1198 of 12 July 2019 imposing a definitive anti-dumping duty on imports of ceramic tableware and kitchenware originating in the People's Republic of China following an expiry review pursuant to Article 11(2) of Regulation (EU) No 2016/1036 (OJ L189, 15.7.2019).

2284 Commission Regulation (EU) No 1072/2012 of 14 November 2012 imposing a provisional anti-dumping duty on imports of ceramic tableware and kitchenware originating in the People's Republic of China (OJ L 318, 15.11.2012, p. 28).

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18.1. INTRODUCTION

The global telecommunications equipment industry is an important and constantly growing industry, reaching revenues of almost USD 100 billion (~ EUR 84.6 billion) in 2021 – a 20% increase over 2017[2285]. The industry includes market participants from around the world,

[2285] Pongratz, S. (2022). *Key takeaways – 2021 total telecom equipment market*. Dell'Oro Group; available at: https://www.delloro.com/key-takeaways-2021-total-telecom-equipment-market/ (accessed on 3 March 2023). Throughout the chapter, conversions to EUR are based on the average exchange rate during the timeframe referenced, using the exchange rate calculator publicly available on the European Central Bank's

producing equipment that falls into three distinct categories: (1) telecommunications terminal equipment, (2) wireless telecommunications equipment and (3) network interconnection transmission equipment[2286]. Telecommunications terminal equipment includes end-use equipment, such as mobile and landline telephones, modems and fax machines[2287]. Wireless telecommunications equipment covers base stations, microwave communication equipment and satellite stations[2288]. Network interconnection transmission equipment consists of products such as internet protocol gateways, switches, access network equipment and routers[2289]. This chapter will cover the latter two categories – wireless telecommunications and network interconnection equipment – and exclude end-use equipment, such as mobile handsets.

Like in other sectors, in order to secure a leading position in the global telecommunications equipment market, the Chinese government has prioritised the development of its indigenous industry through a web of national and sub-national industrial policies[2290]. The most prominent Chinese entities in the global telecommunications equipment market are Huawei Technologies Co., Ltd ('*Huawei*') and ZTE Corporation ('*ZTE*'), which together accounted for almost 40% of the global telecommunications equipment market in 2021[2291].

18.2. CHINESE TELECOMMUNICATIONS INDUSTRY

18.2.1. MAIN INDUSTRY SEGMENTS AND PRODUCERS

The Chinese telecommunications industry is divided into three main segments[2292]. The first segment of the industry is the manufacturers of baseband chips, optical modules and devices and radio frequency devices[2293]. The second segment consists of the base station and transmission equipment manufacturers and network technology companies[2294]. The third segment is the manufacturers of end-use equipment (which includes some of the same manufacturers of transmission equipment), the telecommunications service providers and the

website. European Central Bank. (2023). *Euro foreign exchange reference rates*. https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html (accessed on 25 March 2023).

2286 Wang, J. (28 September 2016). *Introduction of telecommunications equipment network access license (NAL)*, p.6, available at: https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/SiteAssets/Pages/Events/2016/Oct-CandI2016/CAICT2016/Session%201-2%20Introduction%20of%20Telecommunications%20Equipment%20Network%20Access%20License-王健-final.pdf (accessed on 3 March 2023).

2287 *Ibid.*

2288 *Ibid.*

2289 *Ibid.*

2290 See Section 18.3.

2291 Pongratz, S. (2022). *Key takeaways – 2021 total telecom equipment market*. Dell'Oro Group; available at: https://www.delloro.com/key-takeaways-2021-total-telecom-equipment-market/ (accessed on 3 March 2023); Zhao, S. (17 March 2022). *Huawei remains top global player in telecom equipment*. China Daily, available at: https://global.chinadaily.com.cn/a/202203/17/WS6232fe2fa310fd2b29e5192d.html (accessed on 3 March 2023).

2292 LeadLeo (2020). *Overview of telecommunications industry in China in 2020*, p.9, see: https://pdf.dfcfw.com/pdf/H3_AP202010131421070209_1.pdf?1602600927000.pdf (accessed on 3 March 2023).

2293 *Ibid.*

2294 *Ibid.*

end users of telecommunications technologies[2295]. As noted in the introduction, this report does not cover the third category. This section will instead focus on the first two segments.

Two major entities dominate the Chinese telecommunications equipment market – Huawei and ZTE. They combine for a total of 90% of Chinese telecommunications equipment revenue[2296]. Other manufacturers in the industry, such as FiberHome Telecommunication Technologies Co., Ltd; Datang Mobile Communications Equipment Co., Ltd; Hytera; Unisplendour Co., Ltd; Fujian Star-net Communication Co., Ltd and Nokia Shanghai Bell Co., Ltd account for the other 10%[2297].

Huawei and ZTE also occupy significant shares of the global telecommunications equipment market based on a variety of metrics. Huawei had the largest share of the global telecommunications equipment market in 2021, with 28.7% of global sales revenue, while ZTE had 10.5% of global sales revenue[2298]. Moreover, ZTE's share of the global market is growing. For the first quarter of 2022, ZTE attained 12% of the revenue share, an increase of 4 percentage points since 2018[2299]. In global base stations, Huawei had a higher market share in 2021 than

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2295 *Ibid.*

2296 Dell'Oro Group's analysis of the equipment market covered broadband access equipment, microwave and optical transport equipment, mobile core network equipment, RAN equipment and service provider routers and switches. Pongratz, S. (2022). *Key takeaways – 1H22 total telecom equipment market.* Dell'Oro Group, available at: https://www.delloro.com/key-takeaways-1h22-total-telecom-equipment-market/#_ftn1 (accessed on 3 March 2023).

2297 LeadLeo (2020). *Overview of telecommunications industry in China in 2020*, p. 9, available at: https://pdf.dfcfw.com/pdf/H3_AP202010131421070209_1.pdf?1602600927000.pdf (accessed on 3 March 2023); see also ASKCI (2022). *Ranking of publicly listed Chinese telecom equipment companies in 2022 (by revenue)*, available at: https://m.askci.com/news/20220516/1059071857440.shtml (accessed on 3 March 2023); Caiqin Technology (2021). *IPO and listing application documents on the Science and Technology Innovation Board*, p. 8-1-16, avilable at: http://www.csrc.gov.cn/csrc/c100090/c1518958/1518958/files/%E5%8F%91%E8%A1%8C%E4%BA%BA%E5%8F%8A%E4%BF%9D%E8%8D%90%E4%BA%BA%E5%85%B3%E4%BA%8E%E5%8F%91%E8%A1%8C%E6%B3%A8%E5%86%8C%E7%8E%AF%E8%8A%82%E5%8F%8D%E9%A6%88%E6%84%8F%E8%A7%81%E8%90%BD%E5%AE%9E%E5%87%BD%E7%9A%84%E5%9B%9E%E5%A4%8D.pdf (accessed on 20 March 2023); Yurong, W. (29 July 2021). *Shanghai Nokia Bell: attaches great importance to the localization of 700MHz products, which can meet the needs of large-scale deployment across the country.* Communication World All Media, available at: http://www.cww.net.cn/article?id=489265 (accessed on 20 March 2023); Pongratz, S. (2022). *Key Takeaways – 1H22 Total Telecom Equipment Market.* Dell'Oro Group, available at: https://www.delloro.com/key-takeaways-1h22-total-telecom-equipment-market/#_ftn1 (accessed on 3 March 2023).

2298 Other main global market players include Telefonaktiebolaget LM Ericsson ('*Ericsson*'), with 15%; Nokia Corporation ('*Nokia*'), with 14.9%; Cisco Systems, Inc. ('*Cisco*'), with 5.6% and Samsung Electronics Co., Ltd, with 3.1%. See Pongratz, S. (2022). *Key takeaways – 1H22 total telecom equipment market.* Dell'Oro Group, see: https://www.delloro.com/key-takeaways-1h22-total-telecom-equipment-market/#_ftn1 (accessed on 3 March 2023); Zhao, S. (17 March 2022). *Huawei remains top global player in telecom equipment.* China Daily, see: https://global.chinadaily.com.cn/a/202203/17/WS6232fe2fa310fd2b29e5192d.html (accessed on 3 March 2023).

2299 Pongratz, S. (2022). *1Q22 total telecom equipment market: ZTE gains share.* Dell'Oro Group. https://www.delloro.com/1q22-total-telecom-equipment-market-zte-gains-share/#:~:text=Our%20assessment%20is%20that%20ZTE%27s,four%20percentage%20points%20since%202018 (accessed on 3 March 2023).

either Ericsson or Nokia, with a 30% market share[2300]. In global trade, Chinese telecommunications equipment manufacturers account for 44.6% of global telecommunications equipment exports[2301]. Whether recent sanctions and other restrictions from the United States and others will have a lasting impact on the position of Chinese telecommunications equipment firms in the global market remains unclear.

Domestic and cross-border M&A activity throughout the 2010s led to growth in the Chinese industry. In June 2016, Datang Telecom Group announced a partnership with Equinix, Inc, a California-based digital infrastructure firm, offering Equinix's Chinese-based customers an array of interconnection services[2302]. In 2018, the merger of FiberHome Technologies Group and Datang Telecom Group under China Information and Communication Technologies Group was reported to have occurred in part to establish China's growing presence in the 5G space and to facilitate rapid 5G construction[2303].

18.2.2. Corporate Structure of Entities in the Market

18.2.2.1. Permitted Forms of Business Association

Chinese law does not mandate a specific legal form for the economic operators as a prerequisite for participation in the telecommunications equipment market. As a result, several types of business associations operate in the market[2304]. Under the Company Law (see Section 2.2.3.2), companies can be organized in the form of either limited liability companies or joint stock companies[2305]. SOEs supervised by SASAC (see Chapter 5) also operate in the telecommunications equipment market.

18.2.2.2. Presence and Role of SOEs in the Sector

Many telecommunications companies are at least partially state-owned or are otherwise connected to the government, even if this is not (at least publicly) required. ZTE, for example, previously operated as a state-owned military enterprise and maintains a mix of partial state

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2300 Hsieh, K. (2022). *Top three equipment manufacturers estimated to account for 74.5% of global base station market in 2022*. TrendForce, available at: https://www.trendforce.com/presscenter/news/20220801-11324.html (accessed on 3 March 2023).

2301 This statistic includes exports; OEC. Telecommunications equipment, n.e.s.; And parts, n.e.s. of and accessories for the apparatus and equipment falling within division 76. See: https://oec.world/en/profile/sitc/telecommunications-equipment-nes-and-parts-nes-of-and-accessories-for-the-apparatus-and-equipment-falling-within-division-76 (accessed on 3 March 2023).

2302 Cision PR NewsWire (23 June 2016). *Equinix extends data center services in China through partnership with Datang Telecom Group*, available at: https://www.prnewswire.com/news-releases/equinix-extends-data-center-services-in-china-through-partnership-with-datang-telecom-group-300289133.html (accessed on 3 March 2023).

2303 Si, M. (21 July 2018). *Telecom merger to usher in 5G era*. China Daily, available at: http://www.chinadaily.com.cn/a/201807/21/WS5b529dd6a310796df4df7d61.html (accessed on 3 March 2023).

2304 State Council (2021). *Regulations for Administration of Registration of Market Players of the People's Republic of China*. See: http://www.gov.cn/zhengce/content/2021-08/24/content_5632964.htm (accessed on 3 March 2023).

2305 Ministry of Commerce (2019). Company Law of the People's Republic of China. See: http://mg.mofcom.gov.cn/article/policy/201910/20191002905610.shtml (accessed on 3 March 2023).

ownership and private management[2306]. 3 of the 10 largest shareholders of ZTE are SOEs[2307]. Though Huawei claims it is held by its employees[2308], they actually hold only virtual shares that do not constitute ownership and confer no voting rights. The actual shares issued by Huawei are held by the Trade Union Committee. Therefore, taking into account the regulatory framework applicable to trade unions in China, not least the Trade Unions' Charter[2309], the government and/or the CCP have ample leeway to interfere in any of Huawei's business decisions.

Datang Telecom Group and FiberHome Telecommunication Technologies Co., Ltd are both state-owned and operate as subsidiaries of China Information and Communication Technologies Group Corp[2310]. The controlling shareholder of Fujian Star-net Communication Co., Ltd is the Fujian Province SASAC[2311]. Moreover, many purchasers of telecommunications equipment in China are supervised by the national SASAC, such as China Mobile Communications Group Co., Ltd (*'China Mobile'*), China Telecom Corporation Ltd (*'China Telecom'*) and China United Network Communications Group Co., Ltd (*'China Unicom'*)[2312].

18.2.2.3. TALENT DEVELOPMENT

In order to develop a leading telecommunications equipment industry, China has encouraged the frequent pooling and rotation of talent and expertise between the government and equipment manufacturers. Chinese telecommunications equipment firms benefit from deep connections with government agencies and the military, creating pathways 'for personnel transfers, commercialization of state-sponsored R&D (*"spin-off"*), and militarization of commercial R&D

2306 State-Owned Assets Report Magazine (22 July 2019). *Hou Weigui: Pioneer of mixed ownership*. http://www.sasac.gov.cn/n2588025/n4423279/n4517386/n11788753/c11790574/content.html (accessed on 3 March 2023).

2307 ZTE Corp (2022). *2022 semi-annual report*, p.63, available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=gssz0000063&stockCode=000063&announcementId=1214421646&announcementTime=2022-08-27 (accessed on 3 March 2023).

2308 See Huawei (N.D.) *Who owns Huawei?;* available at: https://www.huawei.com/my/facts/question-answer/who-owns-huawei#:~:text=Huawei%20is%20an%20independent%2C%20privately-held%20company.%20We%20are,that%20has%20been%20in%20place%20since%20the%20beginning (accessed on 11 April 2023).

2309 See China Federation of Trade Unions (2020). *Articles of Association of Trade Unions in China*; available at: https://nzw.acftu.org/zcfgjwj/202009/t20200923_494156.html?7OkeOa4k=qAcUrAkL_iOL_iOL_tkjijBNYYfVFe6_1gYNkYuS2Glqqt0o898oqAqq_q (accessed on 11 April 2023).

2310 Si, M. (23 July 2018). *Telecom merger to usher in 5G era*. China Daily; available at: http://www.chinadaily.com.cn/a/201807/21/WS5b529dd6a310796df4df7d61.html (accessed on 3 March 2023).

2311 Fujian Starnet Ruijie Communications Co., Ltd (2022). *2021 annual report*, pp. 91, 205. Star-Net http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=9900012131&stockCode=002396&announcementId=1214662705&announcementTime=2022-09-24 (accessed on 20 March 2023). The national SASAC supervises central SOEs, while some municipalities have their own SASAC that supervises local SOEs. Wils-Owens, L. (2017). *China's Status as a Non-Market Economy*. US Department of Commerce, p. 55; available at: https://enforcement.trade.gov/download/prc-nme-status/prc-nme-review-final-103017.pdf (accessed on 3 March 2023).

2312 SASAC. *Home directory*. See: http://en.sasac.gov.cn/n_688_2.htm (accessed on 3 March 2023).

("*spin-on*")'[2313]. The rotation of engineers and other relevant personnel between and among the government and equipment providers is reported to have aided both Huawei and ZTE in their technological development[2314].

18.3. REGULATORY AND POLICY FRAMEWORK

18.3.1. EARLY POLICY FRAMEWORK

In the 1990s, China began to emphasise the transition to 'informatisation' – the application of information technology to different sectors of the economy – such as through the call during the Fifth Plenary Session of the 14th CCP Central Committee in 1995 to increase informatisation in the Chinese economy, and the creation of China's Ministry of Information Industry, now the MIIT, in 1998[2315]. This greater attention to informatisation and technological advancement reflected the growing importance of telecommunications equipment for China's economic development.

As China focused more on developing its telecommunications equipment industry, the government attempted to reduce the country's reliance on foreign products by developing domestic production capabilities through the use of JVs. Scholars Qing Mu and Keun Lee noted in a 2005 paper that beginning with the first approved foreign investment in the telecommunications equipment industry in 1984 between Shanghai Bell Telephone Equipment Manufacturing Corporation and Bell Telephone Manufacturing Company, the Chinese market became dominated by JVs between foreign firms and domestic entities. Dr Robert Atkinson of the Information Technology & Innovation Foundation ('*ITIF*') explained that China began directing telecommunications service providers to purchase equipment from these JVs and established quotas limiting how much equipment each service provider could import. These JVs, paired with other government and military investments in the industry, became the foundation upon which China's web of strategic plans and policies supported and promoted its indigenous telecommunications equipment companies[2316].

18.3.2. 14TH FIVE YEARS PLAN FOR NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT

2313 Medeiros, E.S., et al. (2005). *A new direction for China's defense industry*, pp. 217–218. https://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG334.pdf (accessed on 3 March 2023).

2314 Atkinson, R. (2020). *How China's Mercantilist Policies Have Undermined Global Innovation in the Telecom Equipment Industry*. Information Technology & Innovation Foundation, p. 10; available at: https://www2.itif.org/2020-china-mercantilist-telecom-equipment-industry.pdf (accessed on 3 March 2023).

2315 China E-Government (13 April 2012). *China's informatisation and e-government construction has a long way to go*, available at: http://www.e-gov.org.cn/article-7515.html (accessed on 3 March 2023).

2316 Atkinson, R. (2020). *How China's Mercantilist Policies Have Undermined Global Innovation in the Telecom Equipment Industry*. Information Technology & Innovation Foundation, p. 10; available at: https://www2.itif.org/2020-china-mercantilist-telecom-equipment-industry.pdf (accessed on 3 March 2023).

The telecommunications equipment industry has been consistently designated in past FYPs as a priority sector for development. For example, the 12th FYP (2011–2015)[2317] and the 13th FYP (2016–2020)[2318] both targeted the development of the telecommunications industry.

The 14th FYP (see Chapter 4) designates Chinese technological independence and self-reliance as core goals for the country's economic development[2319]. The 14th FYP addresses telecommunications equipment in three respects, as discussed below. In promotion of these goals, the 14th FYP directs the provision of various forms of policy support, such as central fiscal funding for major projects, simplifying the processes for project approval and providing the land needed for projects[2320].

Promotion of SEIs: China includes next-generation information technology, including telecommunications equipment, on its list of SEIs that are singled out for support[2321]. The 14th FYP aims to have the 'added value' of these SEIs represent more than 17% of China's GDP by the end of 2025[2322].

New Infrastructure Construction: The 14th FYP also sets forth China's ambition to modernise its industrial system by upgrading the country's technological infrastructure. The plan specifically identifies the development of new digital infrastructure to advance the widespread deployment of 5G networks throughout China and to upgrade gigabit fibre networks[2323]. The plan also prioritises the future development of 6G network capabilities[2324]. The plan states that China intends to "[a]ccelerate the digital transformation of traditional infrastructure such as transportation, energy, and municipal services, and strengthen the construction of ubiquitous sensing, terminal networking and intelligent dispatching systems"[2325].

Digital Development: The 14th FYP further calls for the development of emerging industries that promote China's digitalisation, including advancing the telecommunications equipment industry and "*build*[ing] *5G-based application scenarios and industrial ecosystems*"[2326]. This goal also addresses China's ambitions to develop 'Smart Cities and Digital Villages', which would include "*incorporat*[ing] *facilities with* [Internet of Things] *IoT sensors and communication systems into the unified planning and construction of public infrastructure*"[2327].

2317 National People's Congress (2011). *The 12th FFP for National Economic and Social Development*; available at: http://www.gov.cn/zhuanti/2011-03/16/content_2623428_4.htm (accessed on 3 March 2023).

2318 National People's Congress (2016). *The 13th FYP for National Economic and Social Development*; available at: https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf (accessed on 3 March 2023).

2319 National People's Congress (2021). Outline of the 14th FYP for National Economic and Social Development and Long-Range Objectives for 2035 of the PRC, Recital of Part 2; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 3 March 2023).

2320 *Ibid.*, Chapter 22.

2321 *Ibid.*, Chapter 9.

2322 *Ibid.*, Chapter 9.

2323 *Ibid.*, Chapter 11.

2324 *Ibid.*, Chapter 11.

2325 *Ibid.*, Chapter 11.

2326 *Ibid.*, Chapter 15.

2327 *Ibid.*, Chapter 16.

18.4. TELECOMMUNICATION EQUIPMENT AS PART OF STRATEGIC EMERGING INDUSTRIES

18.4.1. HISTORICAL BACKGROUND

In 2010, China released its Decision of the State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries (see Section 2.3.2). This document directed national and sub-national government agencies to '*vigorously develop strategic emerging industries*' to achieve key national goals, such as building a 'well-off society', '*promot*[ing] *the country's modernisation drive*' and occupying 'a favourable position in future international competition'[2328]. Included among the SEIs, that should be supported through central planning and coordination, including through financial support[2329], was also the next-generation information technology, which included telecommunications equipment[2330].

China's 12th FYP for National Strategic Emerging Industries, released in 2012, described in greater detail the types of next-generation technologies that China aimed to promote through R&D and industrialisation, including IPv4/IPv6 network equipment; high-speed and high-performance network and terminal equipment; support systems; network security equipment; chips that support IPv6; TD-SCDMA; TD-LTE; 4G mobile communication equipment and terminals; high-performance computers; high-end servers; intelligent terminals; network storage and information security and other equipment necessary for informatisation[2331].

The following year, China released the Guiding Catalogue of Key Products and Services for Strategic Emerging Industries, which was revised again in 2016. This catalogue includes in its list of key products network equipment, including next-generation mobile telecommunications equipment; next-generation internet equipment (such as core routers, broadband network access servers, rate interfaces and the supporting IPv6 routing protocol, Ethernet switches, Layer 3 switches and OpenFlow switches); optical telecommunications equipment and terminal testing and meter equipment[2332].

In its 13th FYP for National Strategic Emerging Industries, China emphasized the construction of a 'digital China' – its main forward-looking digital strategy, which includes the development of 5G and 6G technologies[2333] – and promoted integrating various emerging technologies such

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2328 State Council (2010). *Decision of the State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries*; available at: http://www.gov.cn/zwgk/2010-10/18/content_1724848.htm (accessed on 3 March 2023).

2329 *Ibid.*

2330 *Ibid.*

2331 State Council (2012). *12th Five-Year National Strategic Emerging Industry Development Plan* Art. 3(2)1; available at: http://www.gov.cn/zwgk/2012-07/20/content_2187770.htm (accessed on 3 March 2023).

2332 NDRC (2013), revised 2016. *Guiding Catalogue of Key Products and Services for Strategic Emerging Industries*, Art. 1.1.1.; available at: http://www.gov.cn/xinwen/2018-09/22/5324533/files/dcf470fe4eac413cabb686a51d080eec.pdf (accessed on 3 March 2023).

2333 Dorman, D. and Hemmings, J. (11 May 2022). *China's Digital Challenge: Hidden in Plain Sight, Bigger Than You Thought, and Much Harder to Solve*. Center for Strategic and International Studies; available at: https://www.csis.org/analysis/chinas-digital-challenge-hidden-plain-sight-bigger-you-thought-and-much-harder-solve (accessed on 30 June 2023).

as IoT, cloud computing and artificial intelligence ('*AI*') into different industries, while building a next-generation information technology industry[2334].

18.4.2. CURRENT SITUATION

18.4.2.1. NATIONAL LEVEL

Although the central-level 14th FYP for National Strategic Emerging Industries has not been issued as of writing of this Report, some explicit indications have been published by NDRC and MIIT in the form of suggestions for the 14th FYP to develop SEIs (see also Sections 2.3.2, 4.2.1 and 5.2). For example, the NDRC issued in 2021 its Judgment on the Situation of Strategic Emerging Industries and Development Suggestions for the 14th FYP, which highlighted the introduction of numerous national and sub-national level policies and plans during the period of the 13th FYP for National Strategic Emerging Industries, while promoting during the 14th FYP period the 'construction of regional clusters' rather than 'specific industrial projects' and promulgating 'a demand-side innovation policy', such as through increased 5G network construction[2335].

18.4.2.2. LOCAL LEVEL

Against this background, sub-national governments – including Shanghai[2336], Guangzhou[2337], Hunan[2338], Chongqing[2339] and Fujian[2340] – have issued their own 14th FYPs for Strategic Emerging Industries. For example, Shanghai's 14th FYP for Strategic Emerging Industries, issued in 2021, sets the goal that by 2025 the output value of the city's telecommunications industry would be CNY 350 billion (~EUR 46 billion), with an emphasis on next-generation

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2334 State Council (2016). *13th Five-Year Development Plan for the National Strategic Emerging Industries*, Art. 2; available at: http://www.gov.cn/zhengce/content/2016-12/19/content_5150090.htm (accessed on 3 March 2023).

2335 NDRC (2021). *Judgment on the situation of strategic emerging industries and development suggestions of the 14th FYP. Part I,* https://www.ndrc.gov.cn/xxgk/jd/wsdwhfz/202101/t20210104_1264124.html and *Part II,* https://www.ndrc.gov.cn/wsdwhfz/202101/t20210112_1264810.html (accessed on 9 June 2023).

2336 The General Affairs Office of Shanghai Municipal People's Government (2021). *14th FYP for the Development of Strategic Emerging Industries and Leading Industries in Shanghai*; available at: https://www.shanghai.gov.cn/nw12344/20210721/d684ff525ead40d8a2dfa51e541a14e4.html (accessed on 9 March 2023).

2337 The General Affairs Office of Guangzhou Municipal People's Government (2022). *14th FYP for the Development of Strategic Emerging Industries in Guangzhou*; available at: https://www.chacewang.com/newsdetail/news153715.html (accessed on 3 March 2023).

2338 The General Affairs Office of Hunan Provincial People's Government (2021). *14th FYP for the Development of Strategic Emerging Industries*; available at: http://www.hunan.gov.cn/hnszf/xxgk/wjk/szfbgt/202108/t20210825_20396613.html (accessed on 3 March 2023).

2339 The Chongqing Municipal People's Government (2022). *14th FYP for the Development of Strategic Emerging Industries in Chongqing (2021–2025)*; available at: http://www.cq.gov.cn/zwgk/zfxxgkml/wlzcxx/qyjf/wqszf/202203/t20220321_10531169.html (accessed on 3 March 2023).

2340 Fujian People's Government (2021). *14th FYP for Development of Strategic Emerging Industries in Fujian Province*; available at: http://www.fujian.gov.cn/zwgk/ztzl/gjcjgxgg/zc/202110/P020211029381889347681.pdf (accessed on 9 March 2023).

infrastructure, such as new IP networks and all-optical transmission equipment[2341]. The Guangzhou 14th FYP for Strategic Emerging Industries provides discounted rent for buildings used for innovative industries[2342]. Hunan's 14th FYP for Strategic Emerging Industries establishes the goal of building 150 000 5G base stations[2343]. FYPs from other sub-national governments – such as Chongqing[2344] – include general statements about providing tax, loan, grant and other types of subsidies and support, but without including specific commitments.

18.5. TELECOMMUNICATION EQUIPMENT AND MADE IN CHINA 2025

Made in China 2025 (see Section 4.2.3) identifies telecommunications equipment as a critical sector where technological breakthroughs should be pursued[2345].

18.5.1. MAIN GOALS FOR TELECOMMUNICATIONS EQUIPMENT

For telecommunications equipment, Made in China 2025 aims to achieve breakthroughs in 5G technology, core routing and switching technology and 'ultra-high-speed and large-capacity intelligent optical transmission' equipment, while developing next-generation base stations and other telecommunications equipment[2346]. By 2020, China sought to have a leading telecommunications equipment industry and attain 5G leadership[2347]. China's ten-year objectives include having 75% of its domestic market for mobile communications system equipment supplied by Chinese companies[2348], a 50% share of the global market for optical communications equipment and a 20% share of the global routers and switches market[2349]. Moreover, China promulgated the 'Four Essentials' catalogue in 2016, highlighting key components in which China seeks to promote its manufacturing capabilities[2350]. The first category consists entirely of components for 'new generation information technology',

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2341 The General Affairs Office of Shanghai Municipal People's Government (2021). *14th FYP for the Development of Strategic Emerging Industries and Leading Industries in Shanghai*, Art. 3(7); available at: https://www.shanghai.gov.cn/nw12344/20210721/d684ff525ead40d8a2dfa51e541a14e4.html (accessed on 9 March 2023).

2342 The People's Government of Guangzhou Municipality (2022). *14th FYP for the Development of Strategic Emerging Industries in Guangzhou*, Art. 7(3); available at: https://www.gz.gov.cn/zwgk/fggw/wyzzc/content/post_8300595.html (accessed on 9 June 2023).

2343 Department of Science and Technology of the Hunan Province (2021). *Hunan Province's 14th FYP for the Development of Strategic Emerging Industries*, Art. 3(1); available at: http://kjt.hunan.gov.cn/kjt/xxgk/gzdt/yw/202108/t20210826_20399643.html (accessed on 5 June 2023).

2344 Chongqing Municipal People's Government (2022). *14th FYP for the Development of Strategic Emerging Industries in Chongqing*, Art. 6(2); available at: https://www.cq.gov.cn/index/detail.html?policyId=4385 (accessed on 5 June 2023).

2345 State Council (2015). *Made in China 2025*; available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 3 March 2023).

2346 State Council (2015). *Made in China 2025*, Art. III(6)(1); available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 3 March 2023).

2347 National Manufacturing Strategy Advisory Committee (2015). *Roadmap of Major Technical Domains for Made in China 2025*, Art. 1.2.2, available at: https://cset.georgetown.edu/wp-content/uploads/t0181_Made_in_China_roadmap_EN.pdf (accessed on 3 March 2023).

2348 *Ibid.*

2349 *Ibid.*

2350 National Manufacturing Power Construction Strategy Advisory Committee (2016). *Four Essentials Development Catalogue*; available at: http://www.cm2025.org/uploadfile/2016/1122/20161122053929266.pdf (accessed on 9 June 2023).

including intelligent optical communication modules, certain ultra-low loss optical fibres and high-performance base station radio frequency modules and components, among others[2351]. The other categories address other topics unrelated to telecommunications equipment.

18.5.2. SMART MANUFACTURING

Made in China 2025 also emphasizes the development of information technology and telecommunications equipment to improve the Chinese manufacturing process based on the concept of 'smart manufacturing'[2352]. To this end, MOF and MIIT issued the Smart Manufacturing Development Plan (2016–2020)[2353], and MIIT also issued the 14th FYP for the Development of Smart Manufacturing in partnership with other agencies based on the goals outlined in the 14th FYP[2354]. The Smart Manufacturing Development Plan specifically directed the research and development of "industrial network equipment and systems that integrate IPv6, 4G/5G, short-distance wireless, and WiFi technologies" and to "upgrade and transform existing public telecommunication networks' to support smart manufacturing capabilities[2355]. The 14th FYP for the Development of Smart Manufacturing promoted the development of 5G and other technologies that have industrial applications in smart manufacturing, and improvements to IT infrastructure, including 5G[2356].

18.5.3. SUPPORT MEASURES

With Made in China 2025, China's support for telecommunications equipment consists of four parts. The first part is to promote intellectual property rights of firms in the telecommunications equipment industry[2357]. Second, China seeks to support major projects for Chinese telecommunications equipment manufacturers[2358]. Third, Made in China 2025 explains that "*5G spectrum planning*" should "*account* [for] *the spectrum requirements of mobile communications, radio and television, satellite, and military-civil fusion so as to maximize the value of spectrum utilization and achieve the integrated development of related industries*"[2359]. Finally, Made in China 2025 calls for the creation of an inter-ministerial coordination mechanism to encourage the creation of an '*information silk road*' and for the industry to go

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2351 *Ibid.*

2352 National Manufacturing Strategy Advisory Committee (2015). *Roadmap of Major Technical Domains for Made in China 2025*, Art. 1.4.; available at: https://cset.georgetown.edu/wp-content/uploads/t0181_Made_in_China_roadmap_EN.pdf (accessed on 3 March 2023).

2353 MIIT and MOF (2016). *Development Plan for Smart Manufacturing (2016–2020);* available at: http://www.gov.cn/xinwen/2016-12/08/content_5145162.htm (accessed on 3 March 2023).

2354 MIIT, et al. (2021). *14th FYP for the Development of Smart Manufacturing,* available at: https://wap.miit.gov.cn/cms_files/filemanager/1226211233/attach/20226/95c25b0b936d49f1995bd8771599d18a.pdf (accessed on 3 March 2023).

2355 MIIT and MOF (2016). *Development Plan for Smart Manufacturing (2016–2020)*, Art. 4*;* available at: http://www.gov.cn/xinwen/2016-12/08/content_5145162.htm (accessed on 3 March 2023).

2356 MIIT, et al. (2021). *14th FYP for the Development of Smart Manufacturing*, Arts. 3-4, see: https://wap.miit.gov.cn/cms_files/filemanager/1226211233/attach/20226/95c25b0b936d49f1995bd8771599d18a.pdf (accessed on 3 March 2023).

2357 National Manufacturing Strategy Advisory Committee (2015). *Roadmap of Major Technical Domains for Made in China 2025*, p. 10; available at: https://cset.georgetown.edu/wp-content/uploads/t0181_Made_in_China_roadmap_EN.pdf (accessed on 3 March 2023).

2358 *Ibid.*, pp. 10-11.

2359 *Ibid.*, p. 11.

global[2360]. Moreover, the Four Essentials catalogue specifically directs financial institutions, creditors and insurers to support R&D and production of the products in the catalogue[2361].

18.6. INFORMATISATION POLICY

18.6.1. OVERVIEW

Already at the Fifth Plenary Session of the 15th CCP Central Committee, the Committee and the State Council created the 2006–2020 National Informatisation Development Strategy, highlighting informatisation's growing strategic importance for the Chinese authorities[2362]. The promotion and development of telecommunications equipment is also mentioned in the 2016 National Informatisation Development Strategy[2363], which is an update to the 2006 strategy, and the 13th FYP for National Informatisation[2364].

18.6.2. 14TH FYP FOR NATIONAL INFORMATISATION

China's Central Cyberspace Affairs Commission issued the 14th FYP for National Informatisation in December 2021[2365]. The ambitions of the plan are clearly stated:

> *The digital infrastructure system shall be more complete. 5G networks shall be further popularised and adopted, and the requirements of sixth generation mobile communication (6G) technology shall be clarified* [...] *IPv6 and 5G, industrial Internet, Internet of Vehicles, and other fields shall be integrated and innovatively developed* [...] *The capabilities of China's digital infrastructure, including 5G, Internet of Things, cloud computing, and Industrial Internet shall reach globally advanced levels*[2366].

One explicit aim of the 14th FYP for National Informatisation, included as one of the 'Major Task and Focus Projects' of the FYP, is to build a "*ubiquitous, intelligent, and connected digital infrastructure system*"[2367]. To achieve this objective, China sets goals around developing more

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2360 *Ibid.*, p. 11.

2361 National Manufacturing Power Construction Strategy Advisory Committee (2016). *Four Essentials Development Catalogue*; see: http://www.cm2025.org/uploadfile/2016/1122/20161122053929266.pdf (accessed on 9 June 2023).

2362 General Affairs Office of the Central Committee of CPC & General Affairs Office of the State Council (2006). *2006–2020 National Informatisation Development Strategy*; available at: http://www.gov.cn/gongbao/content/2006/content_315999.htm (accessed on 3 March 2023).

2363 General Affairs Office of the Central Committee of CPC & General Affairs Office of the State Council (2016). *Outline of National Informatisation Development Strategy*; available at: http://www.gov.cn/xinwen/2016-07/27/content_5095336.htm (accessed on 3 March 2023).

2364 The State Council (2016). *13th Five-Year National Informatisation Plan*; available at: http://www.gov.cn/zhengce/content/2016-12/27/content_5153411.htm (accessed on 3 March 2023).

2365 Central Cyberspace Affairs Commission (2022). Expert Discussion of the 14th FYP for National Informatisation: Build Intelligent Emergency Response System and Promote the Modernization of Emergency Management; available at: http://www.cac.gov.cn/2022-03/14/c_1648865135184134.htm (accessed on 3 March 2023).

2366 Central Commission for Cybersecurity and Informatisation (2021). *14th FYP for National Informatisation*, Art. II(3); see: https://digichina.stanford.edu/work/translation-14th-five-year-plan-for-national-informatization-dec-2021/#:~:text=During%20the%20%E2%80%9C14th%20Five%2DYear,informatization%2C%20there%20is%20no%20modernization (accessed on 3 March 2023).

2367 *Ibid.*, Art. IV(1).

robust digital infrastructure requiring significant telecommunications equipment investments, such as mass development of 5G commercial networks, upgrading broadband in urban areas, piloting a 'Gigabit City' network, transforming the country's network infrastructure to deploy the latest internet protocol (IPv6) and supporting research on 6G technology and advanced network infrastructure[2368]. Furthermore, the plan aims to advance 'cutting-edge information infrastructure', such as 'satellite telecommunications networks and other [...] networks aimed at global coverage' and 'smart maritime projects' that include 'telecommunications transmission'[2369]. Obviously, these projects require innovative telecommunications equipment. The 14th FYP for National Informatisation describes various 5G projects, which include building out the 5G network, developing and piloting '5G+ Industrial Internet' and the use of 5G in various industries and continued research into '5G enhanced technical standards and applications'[2370]. On policy support for developing a 'digital China', the plan includes measures such as support for R&D of key technologies, improved financial support and coordination across various governmental technology plans[2371].

18.6.3. PROVINCIAL LEVEL PLANS

Provincial governments – including Hebei Province[2372], Guangzhou[2373] and Chengdu[2374] – have also issued their own FYPs for Informatisation to promote development in their regions. For example, Guangzhou's plan promotes the development of access network and core network equipment, next-generation internet equipment, optical communications equipment and satellite telecommunications equipment based on 4G and 5G technologies, while actively testing and developing telecommunications system and terminal equipment[2375]. Guangzhou's 14th FYP for Informatisation includes discounted loans, insurance subsidies and the creation of an 'industrial introduction support fund' for SOEs to fund informatisation projects[2376].

18.6.4. 14TH FYP ON JOINT DEVELOPMENT OF INFORMATISATION AND INDUSTRIALISATION

2368 *Ibid.*, Art. IV(1).
2369 *Ibid.*, Art. IV(1).
2370 *Ibid.*, Box 1.
2371 *Ibid.*, Art. CI(2).
2372 Hebei Cybersecurity and Informatisation Commission (2022). *14th FYP for Informatisation in Hebei*; available at: http://www.caheb.gov.cn/system/2022/06/30/030174590.shtml (accessed on 3 March 2023).
2373 Guangzhou People's Government (2022). *14th FYP for Industry and Informatisation Development in Guangzhou*; available at: https://www.gz.gov.cn/zwgk/fggw/sfbgtwj/content/post_8319334.html (accessed on 9 March 2023).
2374 Chengdu Cyberspace Administration (2022). *14th FYP for Informatisation in Chengdu*; see: http://cddrc.chengdu.gov.cn/cdfgw/c147315/2022-06/16/35d226e663e84509a4c5bfa52654e473/files/26e5a973ac4247f6ae576e4db38f0793.pdf (accessed on 3 March 2023).
2375 Guangzhou People's Government (2022). *14th FYP for Industry and Informatisation Development in Guangzhou*, Art. 3.1.1.; available at: https://www.gz.gov.cn/zwgk/fggw/sfbgtwj/content/post_8319334.html (accessed on 9 March 2023).
2376 *Ibid.*

Since at least the 16th CCP Congress in 2002, another area of focus for the government has been the integration of informatisation and industrialisation[2377]. Government plans thereafter continued to promote the view that informatisation and industrialisation were mutually reinforcing[2378]. MIIT issued the 14th FYP on the Joint Development of Informatisation and Industrialisation, which promotes the coordination of China's informatisation ambitions with its industrialisation goals. The plan explains that this coordination is necessary for China to increase the digital transformation of its economy, and to incorporate IT into its manufacturing capabilities. In furtherance of these efforts, the plan notes the significant progress that China has already made in constructing 5G base stations, and it encourages the continued development of large-scale 5G network infrastructure[2379]. Some sub-national governments, including the provincial governments of Jiangsu[2380] and Jiangxi[2381], issued their own plans focused on the integration of informatisation and industrialisation in their regions, which include commitments to promote these efforts through policy measures and financial support, such as through the use of 'special funds' to upgrade the IT industry and to increase 'research on network infrastructure'[2382]. Moreover, local governments are encouraged to increase investment in businesses that integrate industrialisation and informatisation[2383].

18.7. OTHER PLANS, POLICIES AND STRATEGIES

In addition to the policies already identified, China has other policies covering telecommunications equipment industry. MIIT's 14th FYP for the Development of Software and Information Technology specifically addresses the need to develop new 5G base stations[2384]. The Restructuring Catalogue[2385] (see Section 8.2.2.3 and 4.2.9) and the Catalogue

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2377 Communist Party Network (2002). *The report made by Jiang Zeming at the 16th National Congress of the Communist Party of China*; available at: https://fuwu.12371.cn/2012/09/27/ARTI1348734708607117.shtml (accessed on 3 March 2023).

2378 MIIT (2017). *Development Plan for the Integration of Informatisation and Industrialisation (2016–2020)*; available at: https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/201706/t20170621_1196820.html (accessed on 3 March 2023).

2379 MIIT (2021). *14th FYP on the Joint Development of Informatisation and Industrialisation*, Art. 3(3)1; available at: http://www.gov.cn/zhengce/zhengceku/2021-12/01/content_5655208.htm (accessed on 3 March 2023).

2380 Jiangsu Provincial People's Government (2021). *14th FYP of Jiangsu Province on the Development Plan for the Deep Integration of Informatisation and Industrialization*; available at: https://sme.sipac.gov.cn/epservice/techsub/Apps/psp/index.php?s=/policysearch/policydetail/id/110837 (accessed on 3 March 2023).

2381 Jiangxi Provincial People's Government (2021). *14th FYP of Jiangxi Province on the Development Plan for the Deep Integration of Informatisation and Industrialization*; available at: http://www.jiangxi.gov.cn/art/2021/9/16/art_61150_3590645.html (accessed on 9 March 2023).

2382 Jiangsu Provincial People's Government (2021). *14th FYP of Jiangsu Province on the Development Plan for the Deep Integration of Informatisation and Industrialization*; available at: https://sme.sipac.gov.cn/epservice/techsub/Apps/psp/index.php?s=/policysearch/policydetail/id/110837 (accessed on 3 March 2023).

2383 *Ibid.*

2384 MIIT (2021). *14th FYP for the Development of Software and Information Technology*; available at: http://www.gov.cn/zhengce/zhengceku/2021-12/01/content_5655205.htm (accessed on 3 March 2023).

2385 NDRC (2019). *Guiding Catalogue for Industrial Structure Adjustment*.

Encouraging Foreign Investment[2386]both identify objectives relating to the development of the telecommunications equipment industry as necessary for achieving China's ambitions in these areas.

18.7.1. Guidance Catalogue for Industrial Structure Adjustment

The Guidance Catalogue for Industrial Structure Adjustment (see Section 4.2.9) created three industry categories to direct investment: (1) 'encouraged', in which investment is promoted; (2) 'restricted', in which industries must be upgraded to receive new investment; and (3) 'obsolete', in which there will be no new investment. The 'encouraged' category includes the 'Information Industry', which, as far as telecommunications are concerned, covers activities such as the production of satellite communications system equipment, network equipment, base stations, routers, switches and other supporting equipment[2387].

18.7.2. Catalogue Encouraging Foreign Investment

The Encouraged FI Catalogue (see Section 8.2.3.1) includes in its 'national catalogue of industries that encourage foreign investment' the "*development and manufacture of mobile phones, base stations, core network equipment, optical transmission equipment and network testing equipment for the fourth and fifth generation and subsequent mobile communication systems*", among others[2388]. Meanwhile, at the sub-national level, the catalogue promotes investment in "*R&D and production of communication terminal products and parts*" in Jiangxi Province and the "*R&D and production of contact display and communication terminal products and parts*" in Shaanxi Province[2389].

18.7.3. Provincial level FYPs

On the sub-national level, examples of plans that sought to foster the telecommunications equipment industry and the development of 5G base stations include the Guangxi Zhuang Autonomous Region's 14th FYP for the High-Quality Development of Industry and Informatisation[2390] and Shanxi Province's 14th FYP for the Development of Future Industries[2391], 14th FYP for the Development of New Equipment[2392] and 14th FYP for the

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2386 NDRC, Ministry of Commerce (2012). *Catalogue for Industries Encouraging Foreign Investment*; available at: http://www.gov.cn/zhengce/2022-11/29/content_5730383.htm (accessed on 3 March 2023).

2387 *Ibid.*

2388 NDRC, MOFCOM (2012). *Catalogue for Industries Encouraging Foreign Investment*; available at: http://www.gov.cn/zhengce/2022-11/29/content_5730383.htm (accessed on 3 March 2023).

2389 *Ibid.*

2390 People's Government of Guangxi Zhuang Autonomous Region (2021). *14th FYP for the High-quality Development of Industry and Informatisation;* available at: http://www.gxzf.gov.cn/zwgk/fzgh/zxgh/t11186073.shtml (accessed on 9 March 2023).

2391 Shanxi Provincial People's Government (2021). *14th FYP for the Development for the Future Industries of Shanxi Province;* available at: https://www.shanxi.gov.cn/zfxxgk/zfxxgkzl/fdzdgknr/lzyj/szfwj/202205/t20220513_5976511.shtml (accessed on 3 March 2023).

2392 Shanxi Provincial People's Government (2021). *14th FYP for the Development New Equipment;* available at: http://www.dt.gov.cn/dtzww/sxyw/202106/f9d85b006a064dadb257399fe2fea636.shtml (accessed on 3 March 2023).

Development of New Technology[2393]. For example, Shanxi Province's 14th FYP for the Development of Future Industries includes a section on 'Next Generation Internet Industry' that highlights how the province has built 3,800 5G base stations and established 5G coverage in 11 'city hotspot areas'[2394]. Looking ahead, Shanxi Province intends to "[s]*upport the research and development of 6G network requirements, structure and enabling technologies*"[2395]. In order to achieve this and other goals, Shanxi Province's plan directs the implementation of "*preferential tax policies such as pre-tax deduction of research and development expenses and high-tech enterprises*", the "*integrat*[ion] *and coordinat*[ion of] *existing relevant industry support policies*", stronger "*financial support for key areas of future industries*" and developing and formulating "*government procurement policies for new products, new technologies, and new services that support future industries*", among others. Other relevant policies and plans are described in greater detail in Sections 4.2.6 to 4.2.10.

18.7.4. Electronic Information and ICT Policy

China's plans for the electronic information and ICT industries also impact the telecommunications equipment industry. Plans such as the *Adjustment and Revitalisation Plan for the Electronic Information Industry*[2396] and the *ICT Industry Development Plan (2016–2020)*[2397] addressed telecommunications equipment directly. The 13th FYP articulated China's 'cyber development strategy', which included widespread deployment of telecommunications networks such as high-speed fibre-optic networks and wireless broadband networks[2398]. Goals included fibre-optic networks in 98% of 'administrative villages' and the promulgation of widespread high-speed wireless networks in public spaces[2399]. Moreover, the 13th FYP also promoted the implementation of the 'Internet+' action plan[2400] – which aimed to integrate the internet with manufacturing capabilities and supported the development of 'key network equipment' in furtherance of that goal[2401]. MIIT's 14th FYP for the Development of the ICT

2393 Shanxi Provincial People's Government (2021). *14th FYO for the Development* of *the New Technology;* available at: http://www.lvliang.gov.cn/llxxgk/zfxxgk/xxgkml/sswghzxccx/sjghjjd/wj/202209/t20220919_1693315.html (accessed on 3 March 2023).

2394 Shanxi Provincial People's Government (2021). *14th FYP for the Development for the Future Industries of Shanxi Province*; available at: https://www.shanxi.gov.cn/zfxxgk/zfxxgkzl/fdzdgknr/lzyj/szfwj/202205/t20220513_5976511.shtml (accessed on 3 March 2023).

2395 *Ibid.*

2396 The General Affairs Office of the State Council (2009). *Adjustment and Revitalization Plan of the Electronic Information Industry*; available at: http://www.gov.cn/zwgk/2009-04/15/content_1282430.htm (accessed on 3 March 2023).

2397 MIIT (2016). *Development Plan of Information and Telecommunication Industry (2016–2020)*; available at: https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/201706/t20170622_1196826.html (accessed on 3 March 2023).

2398 National People's Congress (2016). *The 13th FYP for National Economic and Social Development*. Chapter 25; available at: https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf (accessed on 3 March 2023).

2399 *Ibid.*

2400 *Ibid.*, Chapter 26.

2401 State Council (2015). *China unveils Internet Plus action plan to fuel growth*; available at: http://english.www.gov.cn/policies/latest_releases/2015/07/04/content_281475140165588.htm (accessed on 9 June 2023); NDRC, MOST, MIIT, CAC (2016). *"Internet+" Artificial Intelligence Three-Year Action*

Industry builds upon previous plans with a focus on 5G deployment and 6G R&D, while offering fiscal and financial support for ICT R&D, such as through the availability of 'special funds' for network development and a 'guiding role' for 'national government investment funds' and the availability of the 'super deduction' in tax relief for R&D expenses, discussed below in Section 19.4.2. Sub-national governments, including Zhejiang Province[2402] and Jilin Province[2403] have also issued plans covering electronics and ICT. For example, Zhejiang Province established the goal of building 200 000 5G base stations by 2025, at an average annual growth rate of 26.2% in base station construction, supported in part by 'special funds for digital infrastructure' and 'policy support for infrastructure power supply, construction, and application'[2404]. Jilin Province sought to build 55 000 5G base stations by 2025 with a 5G penetration rate of 56%. To achieve that goal, Jilin Province's policies included a '5G base station power supply guarantee' as well as a 'government 5G electricity fee subsidy'[2405].

18.7.5. Digital Economy Policy

China's efforts to build a 'digital China' requires upgrading the country's digital economy technologies and telecommunications infrastructure. Requisite progress in AI, cloud computing and security will, among other things, require cutting-edge telecommunications equipment[2406]. Moreover, the 14th FYP for the Development of the Digital Economy aims to accelerate the development of new network infrastructure to build China's digital economy[2407].

18.7.6. New Internet Infrastructure Policy

The CCP's 2018 Economic Work Conference, the top-level economic policy meeting organized by the CCP Central Committee and the State Council and taking place annually, behind closed doors, proposed accelerating the commercial use of 5G and strengthening new internet

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and Implementation Plan, Art. II(i); available at: https://cset.georgetown.edu/publication/internet-artificial-intelligence-three-year-action-and-implementation-plan (accessed on 9 June 2023).

2402 Zhejiang Provincial Development and Reform Commission, Zhejiang Provincial Telecommunication Administration Bureau (2021). *The 14th FYP of Zhejiang Province for the Development of Information and Communication Industry*; available at: https://fzggw.zj.gov.cn/art/2021/7/27/art_1229123366_2312987.html (accessed on 3 March 2023).

2403 Jilin Provincial Telecommunication Administration Bureau (2021). *The 14th FYP of Jilin Province for the Development of Information and Communication Industry*; available at: https://jlca.miit.gov.cn/zwgk/tzgg/art/2021/art_214cbb5dbff84d2f9917714620900223.html (accessed on 3 March 2023).

2404 Zhejiang Provincial Development and Reform Commission (2021). *14th FYP for the Development of Information and Communication Industry in Zhejiang Province*; available at: https://fzggw.zj.gov.cn/art/2021/7/27/art_1229123366_2312987.html (accessed on 9 June 2023).

2405 Jilin Provincial Telecommunication Administration Bureau (2021). *The 14th FYP of Jilin Province for the Development of Information and Communication Industry*; available at: https://jlca.miit.gov.cn/zwgk/tzgg/art/2021/art_214cbb5dbff84d2f9917714620900223.html (accessed on 3 March 2023).

2406 National People's Congress (2021). Outline of the 14th FYP for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China, Part 5; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 3 March 2023).

2407 State Council (2021). *14th FYP for the Development of the Digital Economy*, Art 3(1); available at: http://www.gov.cn/zhengce/content/2022-01/12/content_5667817.htm (accessed on 3 March 2023).

infrastructure[2408]. China's *2019 Government Work Report* reiterated the goal of strengthening next-generation internet infrastructure[2409], while the 14th FYP also addresses this ambition[2410]. Sub-national governments such as Jiangxi Province[2411], Shanxi Province[2412] and Sichuan Province[2413] similarly address internet infrastructure through their own plans. Shanxi Province, for instance, sets the goal of building 120 000 5G base stations and the construction of gigabit optical fibre broadband, including through the issuance of medium- and long-term loans[2414]. Sichuan Province aims to increase the 5G base stations in the province from 36 000 to 250 000, with user penetration increasing from 11% to 60% from 2020 to 2025, which it aims to achieve through greater credit support, state subsidies and government special bonds[2415]. China has also released national plans specifically on industrial internet[2416] and IoT[2417] that implicate

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2408 Xinhua News Agency (2018, December 21). *The Economic Work Conference of CPC Central Committee was held, Xi Jinping and Li Keqiang made an important speech*; available at: http://www.gov.cn/xinwen/2018-12/21/content_5350934.htm (accessed on 3 March 2023).

2409 Keqiang, L. (2019). *Report on the Work of the Government*. Premier of the State Council; available at: http://english.www.gov.cn/premier/speeches/2019/03/16/content_281476565265580.htm (accessed on 3 March 2023).

2410 National People's Congress (2021). Outline of the 14th FYP for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China, Chapter 11, § 1; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 3 March 2023).

2411 The General Affairs Office of Jiangxi Provincial People's Government (2021). *14th FYP for New Infrastructure Construction of Jiangxi Province*; available at: http://www.jiangxi.gov.cn/art/2021/11/8/art_4968_3711667.html (accessed on 9 March 2023).

2412 Shanxi Provincial People's Government (2021). *14th FYP for New Infrastructure Construction of Shanxi Province*; available at: https://xxgk.jcgov.gov.cn/szfgzbm/jcsdsjyyj/fdzdgknr_31650/ghjh_31657/202108/t20210803_1444991.shtml (accessed on 3 March 2023).

2413 Sichuan Provincial People's Government (2021). *14th FYP for New Infrastructure Construction of Sichuan Province*; available at: https://www.sc.gov.cn/10462/zfwjts/2021/9/10/ff0c000e339b4bd8b83dc2f24e9c88ed/files/103000275dd147fdad979120da9ec426.pdf (accessed on 3 March 2023).

2414 Shanxi Provincial People's Government (2021). *14th FYP for New Infrastructure Construction of Shanxi Province*; available at: https://xxgk.jcgov.gov.cn/szfgzbm/jcsdsjyyj/fdzdgknr_31650/ghjh_31657/202108/t20210803_1444991.shtml (accessed on 3 March 2023).

2415 Sichuan Provincial People's Government (2021). *14th FYP for New Infrastructure Construction of Sichuan Province*; available at: https://www.sc.gov.cn/10462/zfwjts/2021/9/10/ff0c000e339b4bd8b83dc2f24e9c88ed/files/103000275dd147fdad979120da9ec426.pdf (accessed on 3 March 2023).

2416 National People's Congress (2016). *13th FYP of National Economy and Social Development*, Chapter 25; available at: http://www.gov.cn/xinwen/2016-03/17/content_5054992.htm (accessed 3 March 2023); State Council (2017). *Guiding Opinions of the State Council on Deepening 'Internet + Advanced Manufacturing' and Developing Industrial Internet*; available at: http://www.gov.cn/zhengce/content/2017-11/27/content_5242582.htm (accessed on 3 March 2023); MIIT (2018). *Action Plan for the Development of Industrial Internet (2018–2020);* available at: https://www.miit.gov.cn/zwgk/zcwj/wjfb/zh/art/2020/art_3feeff24ae854421b06134a9efd73753.html (accessed on 3 March 2023); MIIT.(2020). *Action Plan for the Innovative Development of Industrial Internet (2021–2023);* available at: http://www.gov.cn/zhengce/zhengceku/2021-01/13/content_5579519.htm (accessed on 3 March 2023); National People's Congress (2021); available at: *Outline of the 14th FYP for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China*, Chapter 16, § 2; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 3 March 2023).

2417 National People's Congress (2021). Outline of the 14th FYP for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China, Chapter 15, § 3; ava

telecommunications equipment through the deployment of these technologies over 5G networks. NDRC's 2020 Guiding Opinions About Expanding Investment in Strategic Emerging Industries and Guiding Opinions on Cultivating and Expanding New Growth Points and Growth Poles specifically promote next-generation IT as a 'key industrial investment area' and direct greater investment in 5G construction and faster paced commercial development of 5G[2418].

18.7.7. Innovation Strategy

China's 2006 National Science and Technology Conference identified scientific and technological innovation as a priority area of development[2419]. Accordingly, indigenous innovation (see also Chapter 2) in technology and science became an area of focus in official Chinese policies, as evidenced by the promulgation of the National Medium- and Long-Term Plan for Science and Technology Development (2006–2020)[2420]. With information technology, the plan aimed to develop 'high-performance core network equipment, transmission equipment, [and] access equipment'[2421]. Thereafter, at the 18th CCP Congress, China proposed an Innovation-Driven Development Strategy that focused on technological innovation with 'Chinese characteristics' and the development of new technologies[2422], which was followed in 2015 by the Several Opinions on Deepening the Reform of Systems and Mechanisms and Accelerating the Implementation of Innovation-Driven Development Strategy[2423]. The State Council then issued the National Innovation-Driven Development Strategy in 2016, which established the goal that China would become an innovative country by 2020, move to the forefront of innovation by 2030 and become a world-leader in science and technology innovation by 2050[2424]. To achieve this goal, one 'strategic task' was to develop next-generation

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liable at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 3 March 2023); MIIT, et al. (2021). 3-Year Action Plan for the Development of Infrastructures for the Internet of Things; available at: http://www.gov.cn/zhengce/zhengceku/2021-09/29/content_5640204.htm (accessed on 3 March 2023).

2418 NDRC.(2020). *Guiding Opinions About Expanding Investment in Strategic Emerging Industries*; available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202009/t20200925_1239582.html (accessed on 9 June 2023); NRDC (2020). *Guiding Opinions on Cultivating and Expanding New Growth Points and Growth Poles*; available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/202009/t20200925_1239582.html (accessed on 9 June 2023).

2419 Xinhua News Agency (2006, January 9). *Hu Jintao's important speech made at the National Science and Technology Conference*; available at: http://www.gov.cn/ldhd/2006-01/09/content_152487.htm (accessed on 3 March 2023).

2420 *Ibid.*

2421 State Council (2006). *National Middle to Long-Term Science and Technology Development Plan (2006–2020)*, Art. 3.1; available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 3 March 2023).

2422 China Court International (2012). *Report made by Hu Jintao at the 18th National Congress of the Communist Party of China*; available at: https://www.chinacourt.org/article/detail/2012/11/id/788634.shtml (accessed on 3 March 2023).

2423 Central Committee of the Communist Party of China and State Council (2015). Several Opinions on Deepening System and Mechanism Reform and Accelerating the Implementation of Innovation-Driven Development Strategy; available at: http://www.gov.cn/xinwen/2015-03/23/content_2837629.htm (accessed on 3 March 2023).

2424 Central Committee of the Communist Party of China and State Council (2016). *National Innovation-Driven Development Strategy Outline*; available at: http://www.gov.cn/zhengce/2016-05/19/content_5074812.htm (accessed on 3 March 2023).

information network technology[2425]. Moreover, sub-national governments, such as that of Heilongjiang Province[2426], have issued their own policies on technology innovation.

18.7.8. CYBERSPACE SECURITY STRATEGY

As discussed in greater detail below in Section 18.8.2.1; cybersecurity certification requirements can amount to a regulatory barrier to accessing the Chinese telecommunications equipment market. More generally, China has repeatedly highlighted cybersecurity as part of its information technology ambitions. In 2016, the 13th FYP noted the relationship between cybersecurity and informatisation development[2427]. China enacted its Cybersecurity Law in November 2016[2428], which, as discussed below in Section 18.8.2.1, serves as a barrier to access the Chinese telecommunications equipment market. As part of the implementation of the Cybersecurity Law, the Cyberspace Administration of China ('*CAC*') issued the National Cyberspace Security Strategy, which called for developing a strong cybersecurity foundation through the development of network infrastructure, promoting safe technological products and strengthening cybersecurity standards[2429]. The need for strengthened cybersecurity is reiterated in the chapter on the digital economy in the 14th FYP[2430].

18.8. MARKET DISTORTIONS

18.8.1. STATE SUPPORT

18.8.1.1. PUBLIC PROCUREMENT

China's emphasis on self-sufficiency in the telecommunications industry and related technologies is reflected in its public procurement and SOE purchasing practices (see also Chapter 7), with both explicit and implicit 'buy China' requirements included in public procurement tenders, especially for products in '*sensitive sectors*' such as ICT[2431]. China's Government Procurement Law directs government entities to grant preference to domestic products over foreign products[2432], but there is no clear or consistent definition of what

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2425 *Ibid.*

2426 Heilongjiang Provincial Industry and Informatisation Bureau (2021). *14th FYP for the Development of Technology Innovation of Industry and Informatisation*; available at: https://zwgk.hlj.gov.cn/zwgk/ueditor/upload/file/20211216/1639645047183073861.pdf (accessed on 3 March 2023).

2427 National People's Congress (2016). *13th FYP of National Economy and Social Development*, Chapter 25; available at: http://www.gov.cn/xinwen/2016-03/17/content_5054992.htm (accessed on 3 March 2023).

2428 National People's Congress. (2016). *Cybersecurity Law*; available at: https://www.audit.gov.cn/n8/n28/c10241260/part/10241604.pdf (accessed on 3 March 2023).

2429 CAC (2016). *National Cyberspace Security Strategy*, Art. 4.7; available at: http://www.xinhuanet.com/politics/2016-12/27/c_1120196479.htm (accessed on 3 March 2023).

2430 National People's Congress (2021). Outline of the 14th FYP for national economic and social development and long-range objectives for 2035 of the People's Republic of China; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 3 March 2023).

2431 Schonberg, A. (2021). *Government procurement and sales to state-owned enterprises in China*. US-China Business Council, p. 6; available at: https://www.uschina.org/sites/default/files/uscbc_government_procurement_report_2021.pdf (accessed on 3 March 2023).

2432 National People's Congress. *Government Procurement Law*, Art. 10; available at: http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/06/content_1382108.htm (accessed on 3 March 2023).

constitutes a 'domestic' product[2433]. Practice among procuring entities is inconsistent as to whether products produced domestically by foreign-owned companies or through Sino-foreign joint ventures will qualify, or whether products must be produced by wholly Chinese-owned companies[2434]. In the ICT sector, SOEs prefer Chinese products over foreign ones, apparently having '*non-public plans to replace foreign products with domestic alternatives in the ICT sector during the 2020–2022 period*'[2435]. Moreover, the lack of transparency in assessment and certification processes creates difficulties for foreign firms to determine how they can qualify their products as 'domestic', particularly with increased weight being placed on difficult-to-quantify security concerns[2436].

18.8.1.2. BELOW MARKET LENDING AND CREDIT FACILITIES

Public reporting suggests that Chinese telecommunications equipment firms have received significant credit assistance from the government and state-owned banks (see Chapter 5). In 2019, it was reported that in the past 20 years, Huawei had USD 30.6 billion (~EUR 27.3 billion) available in credit from China's policy banks[2437]. In 2019, Chinese media reported that Huawei received a five-year CNY 14 billion (~EUR 1.8 billion) loan from a group of state-owned banks[2438]. As of June 2022, ZTE received CNY 7.8 billion (~EUR 1.12 billion) (out of a line of credit of CNY 23.6 billion (~EUR 3.39 billion)) from the CDB, and CNY 6.8 billion (~EUR 976.5 million) (out of a line of credit of CNY 11 billion (~EUR 1.58 billion) from the EXIM[2439]. Because there are no disclosure requirements for such lending, identifying the scale and extent of preferential credit made available to Huawei, ZTE and other telecommunications equipment producers is difficult[2440].

18.8.1.3. PREFERENTIAL TAX TREATMENT

2433 Schonberg, A. (2021). *Government procurement and sales to state-owned enterprises in China*. US-China Business Council, p. 6; available at: https://www.uschina.org/sites/default/files/uscbc_government_procurement_report_2021.pdf (accessed on 3 March 2023).

2434 Schonberg, A. (2021). *Government procurement and sales to state-owned enterprises in China*. US-China Business Council, p. 7; available at: https://www.uschina.org/sites/default/files/uscbc_government_procurement_report_2021.pdf (accessed on 3 March 2023).

2435 *Ibid*., p. 8.

2436 *Ibid*., p. 9.

2437 Yap, C.W. (25 December 2019). *State support helped fuel Huawei's global rise*. Wall Street Journal; available at: https://www.wsj.com/articles/state-support-helped-fuel-huaweis-global-rise-11577280736 (accessed on 3 March 2023).

2438 Link, J. (19 November 2020). *Huawei has an advantage in its push for global dominance. Now the U.S. is trying to counter it*. Washington Post; available at: https://www.washingtonpost.com/politics/2020/11/19/huawei-has-hidden-advantage-its-push-global-dominance-now-us-is-trying-counter-it/ (citing: https://tech.sina.com.cn/t/2019-03-05/doc-ihsxncvh0071993.shtml) (accessed on 3 March 2023).

2439 ZTE (2022). *Prospectus of ZTE on Issuing the 3rd Installment of Super Short-term Commercial Papers in 2022*; available at: http://pdf.dfcfw.com/pdf/H2_AN202209201578532013_1.pdf (accessed on 9 June 2023).

2440 Hart, M., Link, J. (2020). *There is a solution to the Huawei challenge*. Center for American Progress; available at: https://www.americanprogress.org/article/solution-huawei-challenge/ (accessed on 3 March 2023).

As explained in Chapter 19, China provides an array of forms of tax relief, both broadly to high-technology sectors and specifically to certain telecommunications equipment firms. The telecommunications equipment industry has access to this reduced tax rate. Moreover, the High- and New-Technology Enterprise ('*HNTE*') must own the IP of the critical technology for its products or services[2441]. A 2013 report detailed how the IP requirements and disclosure process with local regulators have created a system of de facto discrimination against foreign companies operating in China[2442]. In addition, extensive tax breaks have been reported for Chinese telecommunications equipment firms. From 2008 to 2018, Huawei received deductions and exemptions on up to USD 25 billion (~EUR 21.2 billion) in income, value-added and other taxes[2443]. In 2022, ZTE received CNY 1.3 billion (~EUR 184 million) as a VAT tax refund related to software products, and a refund of CNY 22.4 million (~EUR 3.17 million) in individual income tax service charges[2444]. For 2018 and 2019, FiberHome Telecommunication invested a total of CNY 1.792 billion (~EUR 231 million) in R&D, and it enjoyed a weighted tax 'super deduction' of CNY 1.06 billion (~EUR 136.4 million) for R&D expenses[2445].

18.8.1.4. GRANTS AND OTHER SUBSIDIES

Chinese authorities provide an array of support to the telecommunications equipment industry, including through grants, loans and favourable land sales. The government has made available substantial grant money through initiatives such as the major science and technology projects, first developed in the National Medium- and Long-Term Science and Technology Development Plan (2006–2020)[2446](see Section 8.2.2.1 and 19.3.3.2). Thereafter, the State Council's 13th FYP for National Science and Technology Innovation in 2016 (see also Section 19.3.3), which extended the prior plan to 2030, includes among its projects New Generation Broadband Wireless Mobile Telecommunication, under which both national and sub-national governments have provided significant financial support[2447].

2441 State Council (2016). Notice of the Ministry of Science and Technology, the Ministry of Finance and the State Administration of Taxation on Revising and Issuing the 'Administrative Measures for the Identification of High-tech Enterprises', Art. 11; available at: http://www.gov.cn/gongbao/content/2016/content_5076985.htm (accessed on 25 March 2023).

2442 US-China Business Council (2013). *China's High and New-Technology Enterprise (HNTE) Program*; available at: https://www.uschina.org/sites/default/files/2013%20HNTE%20Backgrounder.pdf (accessed on 3 March 2023).

2443 Yap, C.W. (2019, December 25). *State support helped fuel Huawei's global rise*. Wall Street Journal; available at: https://www.wsj.com/articles/state-support-helped-fuel-huaweis-global-rise-11577280736 (accessed on 3 March 2023).

2444 ZTE. (2023). *2022 Annual Report of ZTE*, available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=gssz0000063&stockCode=000063&announcementId=1216094376&announcementTime=2023-03-11 (accessed on 9 June 2023).

2445 Y. Yuntao (22 April 2021). *100%! Weighted Deduction of R&D Expenses is 'Upgraded', FiberHome Telecommunication May Enjoy Addition Tax Reduction of RMB 170 Million Each Year*. Hubei Daily News; available at: http://m.cnhubei.com/content/2021-04/22/content_13752245.html (accessed on 9 June 2023).

2446 State Council (2006). *Outlines of the National Medium- and Long-term Science and Technology Development Plan (2006–2020)*; available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 3 March 2023).

2447 For example, in 2011, under the 'New Generation Broadband Wireless Mobile Telecommunication' category, the national government provided CNY 990 000 000, and sub-national governments provided CNY 290 000 000 for 63 projects. (2012). *2011 China Science and Technology Development Report*, p.

Huawei, ZTE and others have received extensive government grants, tax incentives and other subsidies[2448]. It was estimated that Huawei received USD 46 billion (~EUR 41 billion) in loans, credit and other forms of state support2449, as well as that the company saved USD 2 billion (~EUR 1.8 billion) on purchases of state-owned land through favourable sales terms[2450]. ZTE disclosed in 2010 that China would provide CNY 301.2 million (~EUR 33.6 million) for certain special projects of ZTE and the subsidiaries controlled by ZTE[2451]. FiberHome Telecommunication disclosed in its 2022 annual report that its balance of assets-related government subsidies was CNY 89.2 million (~EUR 11.3 million), and the balance of income-related government subsidies was CNY 377.5 million (~EUR 48 million)[2452].

18.8.1.5. FORCED TECHNOLOGY TRANSFER

China's practice of requiring foreign firms to share intellectual property and other proprietary information as a condition for market access has been well documented. In 2018, the EU brought a dispute at the WTO raising a number of allegations relating to these practices[2453]. In that dispute, the EU alleged that China's regulatory framework discriminates against foreign IP rights holders[2454]. The USTR documented similar problems in its *2018 Findings on the Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974*[2455]. In that report, the USTR highlighted China's JV requirements, market access conditioned on technology transfer, discretionary and informal approval of foreign investments and the close

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105; available at: https://www.sciping.com/wp-content/uploads/2019/06/%E5%9B%BD%E5%AE%B6%E7%A7%91%E6%8A%80%E9%87%8D%E5%A4%A7%E4%B8%93%E9%A1%B9-%E4%B8%AD%E5%8D%8E%E4%BA%BA%E6%B0%91%E5%85%B1%E5%92%8C%E5%9B%BD%E7%A7%91%E5%AD%A6%E6%8A%80%E6%9C%AF%E9%83%A82011.pdf (accessed on 3 March 2023).

2448 Atkinson, R. (2020). *How China's mercantilist policies have undermined global innovation in the telecom equipment industry*. Information Technology & Innovation Foundation, p. 28; available at: https://www2.itif.org/2020-china-mercantilist-telecom-equipment-industry.pdf (accessed on 3 March 2023).

2449 Yap, C.W. (2019, December 25). *State support helped fuel Huawei's global rise*. Wall Street Journal; available at: https://www.wsj.com/articles/state-support-helped-fuel-huaweis-global-rise-11577280736 (accessed on 3 March 2023).

2450 *Ibid.*

2451 *Announcement on Obtaining Funds for Special Projects*, see: http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=gssz0000063&stockCode=000063&announcementId=57487339&announcementTime=2010-01-09%2006:30 (accessed on 3 March 2023).

2452 *2022 Annual Report of FiberHome Telecommunication*, available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=gssh0600498&stockCode=600498&announcementId=1216517684&announcementTime=2023-04-22 (accessed on 3 March 2023).

2453 WTO. (2018). *China – Certain Measures on the Transfer of Technology*. Request for Consultations by the European Union, WT/DS549/1; available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/549-1.pdf (accessed on 3 March 2023).

2454 *Ibid.*

2455 US Trade Representative. (2018). *Report on China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*; available at: https://ustr.gov/issue-areas/enforcement/section-301-investigations/section-301-china/investigation (accessed on 3 March 2023).

coordination between the government and commercial entities as ways in which foreign entities are compelled to transfer technology to domestic firms[2456].

Reports indicate that these practices are common in the telecommunications equipment industry. China relied heavily on JVs initially to build its domestic telecommunications equipment industry beginning in the 1970s. This practice became more widespread in the 1990s, with Siemens, Ericsson, Motorola, Lucent, Fujitsu, NEC and Nortel all forming JVs. Both Huawei and ZTE established JVs in China with foreign competitors in the late 1990s and early 2000s. To compel foreign firms to establish JVs, the government directed telecommunications service providers to purchase equipment from these JVs and set other limitations on accessing foreign-produced equipment[2457].

18.8.1.6. CHINESE GOVERNMENT PROMOTION ABROAD

The government has used extraordinary export financing arrangements to bolster Chinese telecommunications equipment firms. Public reports reveal that Huawei benefited from significant loans granted to international customers to purchase Huawei's telecommunications equipment. For example, at the direction of the government and in accordance with the policy and planning documents, CDB and other state banks (see Section 6.3.1.3) have offered up to 130% financing for a 20-year period at zero percent interest, including a three-year payment holiday, for the rollout of 5G networks overseas[2458]. ZTE has also been the benefactor of significant export financing over the last 20 years. In 2004, the China Exim Bank provided a USD 500 million (~EUR 402 million) export credit line to ZTE[2459]. In 2009, China Exim Bank agreed to provide ZTE and its business units with USD 10 billion (~EUR 7.2 billion) in export credits and to prioritise such funding[2460]. Moreover, the CDB provided a USD 15 billion (~EUR 10.75 billion) line of export credits to ZTE in 2009 for five years, and USD 20 billion (~EUR 15.6 billion) in 2012[2461].

2456 *Ibid.*

2457 Atkinson, R. (2020). *How China's mercantilist policies have undermined global innovation in the telecom equipment industry*. Information Technology & Innovation Foundation, pp. 7–8; available at: https://www2.itif.org/2020-china-mercantilist-telecom-equipment-industry.pdf (accessed on 3 March 2023).

2458 Balding, C. (2020). *Financing 5G rollout in the face of nation state security threats and non-market subsidies*; available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3537463 (accessed on 3 March 2023).

2459 ZTE. (2004). *Announcement of the Board of Directors of ZTE Corporation*, available at: https://www.zte.com.cn/china/about/investorrelations/announcement/200402/348993.html (accessed on 9 June 2023).

2460 Reuters. (2009, May 22). *ZTE says China Exim Bank to provide loan facility*; available at: https://www.reuters.com/article/zte-eximbank-idUSHKV00214920090522 (accessed on 9 June 2023).

2461 CN Info. (2009). *Announcement on Entry into Development Finance Cooperation Agreement with CDB*; see: http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=gssz0000063&stockCode=000063&announcementId=50375809&announcementTime=2009-03-21%2006:32 (accessed on 9 June 2023); CN Info. (2012). *Announcement on Entry into Development Finance Strategic Cooperation Agreement with CDB*; available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=gssz0000063&stockCode=000063&announcementId=61872270&announcementTime=2012-12-05%2006:30 (accessed on 9 June 2023).

Aggressive export financing has permitted Chinese telecommunication equipment companies to undercut competitors that lack access to such generous terms. For example, in 2006, ZTE won a major telecommunications network contract in Ethiopia through USD 1.6 billion (~EUR 1.3 billion) in low-interest financing supported by Chinese state banks[2462]. A 2016 report from the China Africa Research Initiative at Johns Hopkins University's School of Advanced International Studies highlighted the use of generous export financing from CDB and EXIM by both Huawei and ZTE in South Africa to undercut other telecommunications equipment firms on price[2463]. In 2019, Huawei outbid Ericsson in negotiations with the Dutch telecommunications company KPN to provide equipment for its 5G network, in part based on the financing available for KPN's purchase of Huawei equipment[2464]. Huawei acknowledged that China's state-owned banks had made USD 100 billion (~EUR 89 billion) in credit available to purchasers of Huawei equipment, though it claimed suppliers had used less than 10% of that available credit[2465].

According to an analysis compiling a database of 99 projects that involved Chinese state banks, Huawei and foreign purchasers, such as mobile operators in third country buying Huawei network equipment (see Section 18.2.1)[2466], the average loan size across the 99 projects was USD 155.57 million (~EUR 136.4 million), and for the 32 projects where the interest rate could be identified, 16 had an interest rate below 2%[2467]. The collective value of the loans provided for these projects was almost USD 14.8 billion (~EUR 13 billion), with the largest amount of loans for projects in Africa, Europe and Asia[2468].

The government has also used the Digital Silk Road, which was added to BRI (see Section 4.2.4 in 2015[2469], as a means of incentivising foreign governments to purchase Chinese telecommunications equipment. According to a 2020 report from the Asia Society Policy Institute on BRI, Huawei and ZTE led the construction of fibre-optic cable networks in 70

2462 Dalton, M. (6 January 2014). *Telecom Deal by China's ZTE, Huawei in Ethiopia Faces Criticism*. Wall Street Journal; available at: https://www.wsj.com/articles/telecom-deal-by-china8217s-zte-huawei-in-ethiopia-faces-criticism-1389064617?tesla=y%20 (accessed on 9 June 2023).

2463 Sun, J. (2016). *Technology Transfer in Telecommunications: Barriers and Opportunities in the Case of Huawei and ZTE in South Africa*. China Africa Research Initiative; available at: https://static1.squarespace.com/static/5652847de4b033f56d2bdc29/t/578e8f0be3df282899301e08/1468960523721/Sun+brief+v.6.pdf (accessed on 9 June 2023).

2464 Nakashima, E. (29 May 2019). *U.S. pushes hard for a ban on Huawei in Europe, but the firm's 5G prices are nearly irresistible*. The Washington Post; available at: https://www.washingtonpost.com/world/national-security/for-huawei-the-5g-play-is-in-europe--and-the-us-is-pushing-hard-for-a-ban-there/2019/05/28/582a8ff6-78d4-11e9-b7ae-390de4259661_story.html (accessed on 3 March 2023).

2465 *Ibid.*

2466 Hart, M., Link, J. (2020). *There is a solution to the Huawei challenge*. Center for American Progress; available at: https://www.americanprogress.org/article/solution-huawei-challenge/ (accessed on 3 March 2023).

2467 *Ibid.*

2468 *Ibid.*

2469 Greene, R., Triolo, P. (2020). *Will China control the global internet via its digital Silk Road?* Carnegie Endowment for International Peace; available at: https://carnegieendowment.org/2020/05/08/will-china-control-global-internet-via-its-digital-silk-road-pub-81857 (accessed on 3 March 2023).

countries, including 12 underwater cable projects in Southeast Asia[2470]. By 2021, Huawei had built 70% of the 4G networks in Africa and had increased its share of the global telecommunications equipment market by 40% following the implementation of BRI[2471]. Indeed, in a 2016 speech, the Secretary-General of the Academic Committee of the NDRC noted that 'without [BRI], there would be no Huawei'[2472].

18.8.1.7. China's Presence in International Standards-Setting Bodies

To benefit Chinese companies and to advance the goal of Chinese technological leadership, the state directs Chinese companies to develop standards for the technologies that the companies are using in projects pursued under state-sponsored initiatives such as BRI[2473]. By using technologies with these standards in projects funded under these programs – and supplemented by the signing of nonbinding memoranda of understanding on standards that facilitate cooperation between national standardisation bodies and pursuing other standards harmonisation efforts with project host states – China expands the use of these standards that benefit Chinese telecommunications equipment companies in foreign markets[2474].

18.8.2. Market Access Barriers

18.8.2.1. Regulatory and Licensing Barriers

In December 1998, the Ministry of Information Industry (now MIIT) issued the Administrative Measures for the Examination and Approval of Telecommunications Equipment Network Access, which requires that any equipment used to connect to public and special-use telecommunications networks must first obtain a network access license from the ministry[2475]. Moreover, MIIT developed with the State Bureau of Quality Supervision a catalogue of telecommunications equipment that must receive a license, based on three categories: telecommunications terminal equipment, wireless telecommunications equipment and network

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2470 Russel, D.R., Berger, B.H. (2020). *Weaponizing the Belt and Road Initiative*. Asia Society Policy Institute, p. 21; available at: https://asiasociety.org/sites/default/files/2020-09/Weaponizing%20the%20Belt%20and%20Road%20Initiative_0.pdf (accessed on 9 June 2023).

2471 Sacks, D. (2021). *China's Huawei is winning the 5G race. Here's what the United States should do to respond*. Council on Foreign Relations; available at: https://www.cfr.org/blog/china-huawei-5g (accessed on 3 March 2023).

2472 Xiaofei, L. (2 September 2016). *Zhang Yansheng: Without the Belt and Road initiative, there would be no Huawei*. Finance China; available at: http://finance.china.com.cn/news/special/2016g20summit/20160902/3889560.shtml (accessed on 3 March 2023).

2473 Russel, D.R. & Berger, B.H. (2021). *Stacking the deck: China's influence in international technology standards setting*. Asia Society Policy Institute, p. 9; available at: https://asiasociety.org/sites/default/files/2021-11/ASPI_StacktheDeckreport_final.pdf (accessed on 3 March 2023).

2474 Russel, D.R. & Berger, B.H. (2021). *Stacking the deck: China's influence in international technology standards setting*. Asia Society Policy Institute, pp. 9, 28; available at: https://asiasociety.org/sites/default/files/2021-11/ASPI_StacktheDeckreport_final.pdf (accessed on 3 March 2023).

2475 Ministry of Information Industry. (1998). *Administrative Measures on the Approval of Telecommunications Equipment Access to Network*, Art. 3; available at: https://law.pkulaw.com/chinalaw/0bd23fcadbe2bb74bdfb.html (accessed on 3 March 2023).

connection equipment[2476]. In January 2023, China dropped the licensing requirement for 11 types of telecommunications equipment (mostly end-use equipment), though producers must share standards used for these products with Chinese regulators. While those 11 categories of equipment are exempt from the licensing requirement, licensing requirements have been introduced for two new categories – satellite internet equipment and functional visualisation equipment[2477]. Radio transmission equipment, both domestically produced and imported into China, must also obtain and file an approval certificate before it can be sold in the Chinese market[2478].

Following the adoption of China's Cybersecurity Law in 2016, some telecommunications equipment must undergo additional certification requirements[2479]. Under that law, a qualified institution must certify the security of and test critical network equipment and network security-specific products[2480]. The government also promulgates a catalogue of network equipment and network security-specific products that must undergo testing and certification before they can be marketed in China[2481]. The first catalogue was issued in 2017 and includes routers, switches, servers and programmable logic controller devices as key network equipment[2482]. Pursuant to authority under the Cybersecurity Law and China's National Security Law, CAC led the promulgation of Measures for Cybersecurity Review in 2020[2483].

China's Catalogue of Network Equipment and Network Security Products outlines the requirements for certification and testing to qualify for sale in China[2484]. Article 7 requires that telecommunications equipment must undergo 'implementation testing' by certain Chinese ministries and state-controlled organizations and also must retain an installation license[2485]. Article 8 of China's Critical Network Equipment Security Testing Rules states that MIIT 'shall

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2476 Wang, J. (2016). *Introduction of Telecommunications Equipment Network Access License (NAL)*. International Telecommunications Union; available at: https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/SiteAssets/Pages/Events/2016/Oct-CandI2016/CAICT2016/Session%201-2%20Introduction%20of%20Telecommunications%20Equipment%20Network%20Access%20License-%E7%8E%8B%E5%81%A5-final.pdf (accessed on 3 March 2023).

2477 MIIT. (2023). *Reform Measures on the Network Access License System for Telecommunications Equipment*, Art. 1; available at: http://www.gov.cn/zhengce/zhengceku/2023-02/07/content_5740471.htm (accessed on 3 March 2023).

2478 State Council & Military Commission of the Central Committee of the CCP. (2016). *Regulations on the Radio Management*, Art. 44, 48; available at: http://www.gov.cn/zhengce/content/2016-11/25/content_5137687.htm (accessed on 3 March 2023).

2479 National People's Congress. (2016). *Cybersecurity Law*, Art. 23; available at: https://www.audit.gov.cn/n8/n28/c10241260/part/10241604.pdf (accessed on 3 March 2023).

2480 *Ibid.*

2481 *Ibid.*

2482 MIIT, et al. (2017, June 1). Announcement on the Issuance of the Catalog of Key Network Equipment and Network Security-Safety Products (1st Batch); available at: http://www.gov.cn/xinwen/2017-06/09/content_5201276.htm (accessed on 3 March 2023).

2483 Ross, L. & Zhou, K. (2020). *China issues new cybersecurity review measures*. WilmerHale; available at: https://www.wilmerhale.com/en/insights/client-alerts/20200518-china-issues-new-cybersecurity-review-measures (accessed on 3 March 2023).

2484 L.C., Neville, K. & Webster, G. (12 June 2019). *Translation: New draft rules for 'critical network equipment security testing' in China*. New America; available at: https://www.newamerica.org/cybersecurity-initiative/digichina/blog/translation-critical-network-equipment-testing-implementing-measures-draft-comment/ (accessed on 3 March 2023).

2485 *Ibid.*

review and verify critical network equipment security testing reports and materials and issue a list of critical network equipment that has passed security testing [...] in accordance with relevant state regulations, valid for 3 years'[2486]. Available analyses suggest that these regulations operate as market access barriers to foreign businesses attempting to supply the Chinese market, with ambiguity in how these laws, regulations and standards would be applied creating opportunity for discriminatory enforcement[2487].

18.8.2.2. Inconsistent Enforcement and Protection of Intellectual Property

As with forced technology transfer[2488], China's enforcement of intellectual property rights results in uneven protection for foreign telecommunications firms operating in China. Cybersecurity audits under China's Cybersecurity Law can require the disclosure of intellectual property and proprietary source code and "[w]*hile the government may not always choose to enforce these unwritten rules, the government's position can change at any time as it leverages the vagueness of the rules*"[2489].

The EU filed a WTO dispute in February 2022 challenging China's policy of blocking the enforcement of intellectual property rights abroad by EU telecommunications equipment companies[2490]. The EU complained that Chinese courts use 'anti-suit injunctions' under China's Civil Procedure Law to prevent European firms from enforcing patents (notably, standard-essential patents) against Chinese companies in foreign courts and to reduce royalties and licences paid to these firms[2491]. Violating these anti-suit injunctions and seeking to enforce these rights can result in significant fines for the foreign firms[2492]. The EU's request for consultations noted five cases involving telecommunications equipment vendors since 2020 that resulted in the application of anti-suit injunctions, two of which involved Huawei and ZTE, with the others filed by Chinese consumer electronics manufacturers OPPO and Xiaomi, as well as Samsung, the South Korean manufacturer[2493]. This case is still pending, and a WTO panel has yet to rule on the EU's allegations.

2486 *Ibid.*

2487 Sacks, S. & Li, M.K. (2018). *How Chinese cybersecurity standards impact doing business in China*. Center for Strategic & International Studies; available at: https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/180802_Chinese_Cybersecurity.pdf (accessed on 3 March 2023).

2488 See Section 18.8.1.5.

2489 Sacks, S. & Li, M.K. (2018). *How Chinese Cybersecurity Standards Impact Doing Business in China*. Center for Strategic & International Studies, p. 4; available at: https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/180802_Chinese_Cybersecurity.pdf (accessed on 3 March 2023).

2490 WTO. (2022). *China – Enforcement of intellectual property rights*. Request for Consultations by the European Union, WT/DS611/1; available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/611-1.pdf (accessed on 3 March 2023).

2491 *Ibid.*

2492 *Ibid.*

2493 *Ibid.*

18.9. CHAPTER SUMMARY

China's designation of the telecommunications equipment industry as critical for technological development and leadership is reflected in the myriad plans, policies and strategies that the country's national and sub-national governments have promulgated. This web of government planning is implemented through a broad array of policies that benefit domestic firms – at the expense of foreign firms. By protecting the domestic market and promoting Chinese firms abroad, China has assisted its key stakeholders in developing a significant presence in the global telecommunications equipment market[2494]. 5G infrastructure is a case in point where China's policies have allowed its firms (notably, Huawei and ZTE) to operate relatively expensively on the protected home market, while helping them to offer less expensive services abroad.

China's distortions of the telecommunications equipment market come in a variety of forms. The State provides support to firms through procurement preferences, below market lending, tax relief and subsidies and grants. The government both explicitly and implicitly forces the transfer of technology from foreign firms to domestic entities. Internationally, China uses generous export financing to convince foreign governments and other buyers to purchase Chinese-made telecommunications equipment. China has also developed a national standardisation strategy that includes seeking leadership positions and exercising influence in international standards-setting bodies to promote Chinese commercial interests. China further protects its internal market through complex regulatory and licensing barriers. Finally, the government's inconsistent intellectual property enforcement leaves foreign firms vulnerable to intellectual property right violations and involuntary and uncompensated technology transfer.

2494 Pongratz, S. (2022). *Key takeaways – 1H22 total telecom equipment market*. Dell'Oro Group; available at: https://www.delloro.com/key-takeaways-1h22-total-telecom-equipment-market/#_ftn (accessed on 3 March 2023).

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19.1. CHINA'S SEMICONDUCTOR INDUSTRY

19.1.1. MAIN INDUSTRY SEGMENTS

Semiconductors, also known as computer chips ('*chips*') or integrated circuits ('*ICs*')[2495], are small electronic devices that form the foundation of many key technological systems, including consumer electronics such as cell phones and laptops, as well as more complex systems in the areas of defence, healthcare, manufacturing and transportation, among many others. When implanted onto the circuit board of electronic devices, semiconductors can operate to store and process data; run software applications; or perform communication, graphics, power management or other capabilities, depending on the precise functionality for which the semiconductor was built[2496].

The semiconductor production supply chain is globally interconnected, with various stages of the production process operating across national borders. The steps involved in the production of semiconductors include three distinct phases:

> Design: The design of the semiconductor determines how the chip should operate in the system using it, and engineers use specialised software (known as electronic design automation software) to draw a detailed layout of the interconnected electronic components that will form an IC. This stage of the production process is generally talent-intensive, relying on the skills and knowledge of design engineers. The design stage also relies on intellectual property ('*IP*') related to chip design, known as 'core IP'[2497].

2495 Semiconductors is a term also used to refer to products containing semiconducting materials, such as silicon.

2496 See The Organization for Economic Co-operation and Development, (2019, December 12), Measuring distortions in international markets: The semiconductor value chain. *OECD Trade Policy Papers*, No. 234, p. 11, available at: https://www.oecd-ilibrary.org/trade/measuring-distortions-in-international-markets_8fe4491d-en (accessed on 25 May 2023) ('*OECD Report 2019*').

2497 *Ibid.*, p. 17; Khan, S. M., Peterson, D., & Mann, A. (2021). The semiconductor supply chain: Assessing national competitiveness. *Center for Security and Emerging Technology* ('*CSET*'), p. 4, available at: https://doi.org/10.51593/20190016 (accessed on 25 May 2023) ('*CSET' Report 2021*').

Fabrication: Fabrication facilities, also known as *'fabs'*, undertake the physical production of semiconductors. For purposes of fabrication, semiconductors comprise several components. The base layer of a semiconductor is the wafer, a thin disk (approximately 0.5 to 1 millimetres thick) that is manufactured using high-purity silicon. The wafer generally undergoes several fabrication processing steps, such as doping[2498], etching and photolithography[2499]. Electronic circuits with components such as transistors are formed on the surface of the wafer. This stage of the production process generally involves highly specialised machinery and production equipment, known as semiconductor manufacturing equipment, which is itself an important segment of the industry[2500].

Assembly, Testing and Packaging (*'ATP'*): During this stage of the production process, wafers are sliced into individual semiconductors, encased in plastic and put through a quality control process. The ATP phase of semiconductor production generally is more labour-intensive and lower value than design and fabrication, and therefore has fewer barriers to entry. Firms conducting these activities have historically set up ATP facilities in developing countries[2501]. Some firms have developed expertise in more advanced ATP as well.

There are generally two models for semiconductor production. Under the first model, a single integrated device manufacturer (*'IDM'*) firm performs all three of the production steps, whereas under the second, *'fabless-foundry'* model, each step is performed by a different firm.

Developed countries in Europe, along with the US, South Korea, Japan and Taiwan, specialise in various segments of the semiconductor supply chain. China is a strong participant in the ATP segment of the supply chain; it also demonstrates strength in segments of the industry relating to tools for assembly and packaging, as well as raw materials. China's market presence is less strong in other supply chain segments, particularly with production inputs including semiconductor manufacturing equipment, electronic design automation and core IP; still, China is making progress in the areas of chip design and manufacturing with the assistance of substantial state support[2502].

19.1.2. China's Position in the Global Marketplace

2498 Doping is the process of introducing impurities (such as boron, aluminium or gallium) to vary the number of electrons and holes in semiconductors.

2499 Photolithography is the process by which ultra-violet light is used to print and etch circuits directly onto the surface of a silicon wafer.

2500 CSET Report 2021, p. 19.

2501 *Ibid.*, p. 23.

2502 *Ibid.*, p. 3.

Overall, total global semiconductor sales for 2022 were estimated to be valued at approximately USD 574.1 billion (~EUR 546 billion)[2503]–marking the highest total to date[2504]. In 2020, Chinese-headquartered firms were estimated to account for between 6,7% and 9% of global sales of semiconductor devices, with some estimates indicating that China surpassed Taiwan in global sales that year for the first time and was approaching a market share similar to that of Europe and Japan[2505]. In 2022, global semiconductor sales revenue rose to approximately USD 602 billion (~EUR 573 billion), up from USD 595 billion (~EUR 503 billion) in 2021[2506]. Some estimates indicate that China's share of the overall market declined slightly in 2021, to as low as 6,5%[2507]. It has been suggested that this decline may be at least partially a consequence of export control measures adopted by the US against Chinese semiconductor products[2508]. While China's relative share may have dipped slightly, reporting by the Chinese Semiconductor Industry Association ('*SIA*') indicates that in absolute terms, "*sales by China's integrated circuit industry in 2021 were about RMB 1.05 trillion* [~EUR 137 billion], *a year-on-year increase of 18,2%*"[2509].

Since 2005, China has been the largest single-country market for semiconductors[2510]. In 2020, China imported approximately USD 378 billion (~EUR 331,4 billion) in semiconductors[2511].

2503 Throughout the chapter, conversions to EUR are based on the average exchange rate during the timeframe referenced, using the exchange rate calculator publicly available on the European Central Bank's website. European Central Bank. (2023). *Euro foreign exchange reference rates*, available at: https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html (accessed on 25 May 2023).

2504 Semiconductor Industry Association ('*SIA*'). (2023). *Global Semiconductor Sales Increase 3.3% in 2022 Despite Second-Half Slowdown*, available at: https://www.semiconductors.org/global-semiconductor-sales-increase-3-2-in-2022-despite-second-half-slowdown/ (accessed on 25 May 2023).

2505 SIA. (2022). *China's share of global chip sales now surpasses Taiwan's, closing in on Europe's and Japan's*, available at: https://www.semiconductors.org/chinas-share-of-global-chip-sales-now-surpasses-taiwan-closing-in-on-europe-and-japan/ (accessed on 25 May 2023).

2506 Gartner. (2023, January 17). *Gartner Says Worldwide Semiconductor Revenue Grew 1.1% in 2022* [Press release], available at: https://www.gartner.com/en/newsroom/press-releases/2023-01-17-gartner-says-worldwide-semiconductor-revenue-grew-one-percent-in-2022 (accessed on 23 May 2023).

2507 *Ibid.*

2508 China Semiconductor Industry Association ('*CSIA*'), (2022). *The operation of China's integrated circuit industry in 2021*, available at: https://web.csia.net.cn/newsinfo/2523503.html (accessed on 25 May 2023); Gartner. (2022, April 14). *Gartner says worldwide semiconductor revenue grew 26% in 2021* [Press release], available at: https://www.gartner.com/en/newsroom/press-releases/2022-04-14-gartner-says-worldwide-semiconductor-revenue-grew-26-percent-in-2021 (accessed on 25 May 2023).

2509 CSIA. (2022). *The operation of China's integrated circuit industry in 2021*, available at: https://web.csia.net.cn/newsinfo/2523503.html (accessed on 25 May 2023). This discrepancy in measurements across trade associations may be due in part to use of divergent data sets. In addition, it is possible that, even if China's market share was indeed decreasing, as reported by SIA, this may not correspond with an absolutely decrease in production quantities.

2510 PricewaterhouseCoopers. (2016). *China's semiconductor market*, available at: https://www.pwc.com/gx/en/industries/technology/chinas-impact-on-semiconductor-industry/china-semiconductor-market.html (accessed on 25 May 2023); Yinug, F. (2009). Challenges to foreign investment in high-tech semiconductor production in China. *US International Trade Commission Journal of International Commerce and Economics;* available at: https://www.usitc.gov/publications/332/journals/semiconductor_production.pdf (accessed on 8 June 2023).

2511 SIA. (2021). *SIA Whitepaper: Taking stock of China's semiconductor industry*, p. 1, available at: https://www.semiconductors.org/wp-content/uploads/2021/07/Taking-Stock-of-China's-Semiconductor-Industry_final.pdf (accessed on 25 May 2023) .

Sizable Chinese demand is driven in part by China's status as the world's largest manufacturing hub for electronics[2512]. As of mid-2021, China produced approximately 36% of the world's supply of electronics[2513]. Many of these products are exported, with China accounting for 30% to 70% of global TV, PC and mobile phone exports, depending on the precise product[2514]. Domestic Chinese demand for such products is also substantial. China is the second largest final consumption market for electronics embedded with semiconductors, accounting for one-quarter of global consumption in 2020[2515].

Coupled with this strong demand is unprecedented growth of the semiconductor industry in China across all segments of the supply chain, with design (*'fabless'*) and manufacturing (*'foundry'*) firms in 2020 having achieved an estimated annual growth rate of 36% and 32%, respectively, according to industry data[2516]. China holds a substantial share of the ATP market[2517] and is also strong with respect to the production of certain raw materials used in the semiconductor sector[2518]. In particular, China has the largest market share for several key raw materials used in the production of integrated circuits (*'ICs'*), including aluminium, antimony, arsenic, bismuth, carbon, fluorine, gallium, germanium, magnesium, molybdenum, phosphorus, rare earth materials, silicon, tellurium and tungsten[2519] (see also Chapter 12). China also has significant market share for many other raw materials used in the production of semiconductors, with notable exceptions for cobalt and platinum[2520]. Moreover, China is also a major front-end wafer manufacturer.

In order to secure proximity to customer supply chains, an increasing number of Chinese and foreign foundries and IDMs have been setting up fabrication plants in China. As a result, almost a quarter of the global installed wafer capacity is now located in China[2521].

By May 2021, China's IC output had grown by roughly 37,6% since May 2020[2522]. Overall, the semiconductor sector's value-added industrial output grew by 60% between 2020 and 2021[2523].

2512 *Ibid.*

2513 *Ibid.*

2514 *Ibid.*

2515 *Ibid.*

2516 SIA. (2022). *China's share of global chip sales now surpasses Taiwan's, closing in on Europe's and Japan's*, available at: https://www.semiconductors.org/chinas-share-of-global-chip-sales-now-surpasses-taiwan-closing-in-on-europe-and-japan/ (accessed on 25 May 2023).

2517 *Ibid.*

2518 CSET Report 2021, p. 4.

2519 *Ibid.*, p. 54.

2520 *Ibid.*, pp. 53–54.

2521 Installed wafer capacity measures the share of production capacity (fabs) located in a particular country, regardless of the location of the headquarters for the companies that own the fabs. China, specifically, hosts 23% of global installed wafer capacity, of which 30% is owned and operated by multinational firms predominantly from other East Asian nations. SIA Whitepaper 2021, pp. 2–3.

2522 Ye, J. (2021, June 16). *China's semiconductor output in May hits all-time high amid chip shortage and tech war with US.* South China Morning Post, available at: https://www.scmp.com/tech/tech-war/article/3137537/chinas-semiconductor-output-may-hits-all-time-high-amid-chip-shortage (accessed on 25 May 2023) (reporting on the release of data by China's National Bureau of Statistics).

2523 Lee, J., & Kleinhans, J. P. (2021). *Mapping China's semiconductor ecosystem in global context*. Mercator Institute for China Studies (*'MERICS'*), available at: https://merics.org/en/report/mapping-chinas-semiconductor-ecosystem-global-context-strategic-dimensions-and-conclusions (accessed on 25 May 2023) .

With respect to the supply of ICs in China's domestic market, ICs produced in China were estimated to account for approximately 16% of total domestic semiconductor sales, or USD 22.7 billion (~EUR 19,9 billion), in 2020[2524]. According to sectoral research reports, China-headquartered companies produced an estimated USD 12.3 billion (~EUR 10,4 billion), or 39,4%, of the USD 31.2 billion (~EUR 26,4 billion) worth of ICs manufactured in the country in 2021[2525]. With the Government's efforts to pursue self-reliance in the semiconductor industry, and with the funding available to boost chip production, it is expected that the growth trend will continue in the following years.

19.1.2.1. GROWTH IN NUMBER AND SCALE OF CHINESE FIRMS

The Government's push to develop the semiconductor industry in China has led to a sometimes chaotic race to establish new companies. More than 22 800 new semiconductor companies were established in China in 2020 alone, nearly tripling in number from 2019 to 2020[2526]. This growth trend continued into the first half of 2021, with a further 15 700 new semiconductor companies established during just the first five months of 2021, operating across supply chain segments including chip design and manufacturing[2527]. The creation of these companies was made possible in part by broadly available financing offered both by the State and private actors. Of the 22 800 new firms established in 2020, 40 were publicly traded on the Shanghai '*STAR*' Market[2528] as of May 2021 and had collectively raised approximately EUR 25 billion during their IPOs[2529]. This race in chip company creation led also to a number of bankruptcies and corruption investigations. A number of large market players collapsed after receiving considerable financing from GGFs (see Section 6.5), including Tsinghua Unigroup, Wuhan Hongxin Semiconductor Manufacturing ('*HSMC*') and Quanxin Integrated Circuit Manufacturing[2530].

In addition to an increase in the number of firms, Chinese semiconductor firms are also expanding in terms of the size and scope of their operations. For example, in 2021:

2524 Foster, S. (2021, January 18). *Get real about the Chinese semiconductor industry*. Asia Times, available at: https://asiatimes.com/2021/01/get-real-about-the-chinese-semiconductor-industry/ (accessed on 25 May 2023).

2525 See for example at: https://www.design-reuse.com/news/51960/china-ic-marketshare-forecast.html (accessed on 17 November 2022).

2526 SIA Whitepaper 2021, p. 4.

2527 Ye, J. (2021, June 9). *New Chinese semiconductor firms have tripled in 2021 as Beijing and Washington jockey over technological supremacy*. South China Morning Post, available at: https://www.scmp.com/tech/tech-war/article/3136660/new-chinese-semiconductor-firms-have-tripled-2021-beijing-and (accessed on 25 May 2023).

2528 SIA Whitepaper 2021, p. 4. Established in 2019, the Shanghai '*STAR*' market is a Chinese science and technology focused equities market.

2529 *Ibid*.

2530 Chiang, M. H. (2022). *Exposing China's semiconductor vulnerabilities*. The Heritage Foundation, available at: https://www.heritage.org/asia/commentary/exposing-chinas-semiconductor-vulnerabilities (accessed on 25 May 2023).

- Huawei Technologies Co. invested USD 12.8 million (~EUR 10,8 million) in RSLaser Opto-Electronics Technology, a Beijing-based company that produces excimer lasers for lithography[2531].
- Semiconductor Manufacturing International Corp. (*'SMIC'*) announced plans to establish a USD 8.87 billion (~EUR 7,5 billion) chip factory in Shanghai with a projected capacity of 100 000 silicon wafers per month. SMIC also announced plans to build new foundries in Beijing, Shenzhen and Shanghai, as well as to implement expansion plans at other existing facilities[2532].
- Xiaomi Corp. became one of the few smartphone manufacturers (along with Samsung, Apple and Huawei) that design their own chips[2533].

Along with this growth in the number and scale of companies active in the semiconductor industry, Chinese output is also increasing, as noted above.

19.1.2.2. FUTURE OUTLOOK

At the time of writing this Report, China was estimated to account for between 6,7% and 9% of global chip sales in 2020[2534]. IC Insights, a semiconductor market research company, further reported that China-based IC production is estimated to grow by 2026 to *"8,1% of the total forecasted 2026 worldwide IC market of $717.7 billion"*[2535]. US-based SIA estimates that China may capture over 17% of total market sales in the semiconductor sector by 2024, obtaining the third-highest market share behind the US and South Korea[2536]. SIA reports that foundry capacity as well as memory capacity in China is projected to increase at a compound annual growth rate of 14,7% through 2031, and China's semiconductor industry as a whole is expected to nearly double its installed wafer capacity, reaching approximately 19% of worldwide installed chip manufacturing capacity[2537].

19.2. PRESENCE OF STATE-OWNED OR CONTROLLED ENTITIES IN THE SEMICONDUCTOR SECTOR

2531 R. Mitchell (2021, June 6). *Huawei invests in lithography to achieve supply-chain sovereignty*, available at: https://www.electropages.com/blog/2021/06/huawei-invests-lithography-achieve-supply-chain-sovereignty (accessed on 25 May 2023).

2532 Pan, C. (2022, March 31). *US-China tech war: Top Chinese chip makers push ahead with expansion plans despite political tensions, talk of supply glut*. South China Morning Post, available at: https://www.scmp.com/tech/tech-war/article/3172628/us-china-tech-war-top-chinese-chip-makers-push-ahead-expansion-plans (accessed on 25 May 2023).

2533 Jeet. (2021, June 9). *Xiaomi to reorganize team for chip manufacturing as it eyes re-entry in the market*. GIZMOCHINA, available at: https://www.gizmochina.com/2021/06/09/xiaomi-entering-chip-manufacturing-market/ (accessed on 25 May 2023).

2534 SIA. (2022). *China's share of global chip sales now surpasses Taiwan's, closing in on Europe's and Japan's*, available at: https://www.semiconductors.org/chinas-share-of-global-chip-sales-now-surpasses-taiwan-closing-in-on-europe-and-japan/ (accessed on 25 May 2023).

2535 See for example at: https://www.design-reuse.com/news/51960/china-ic-marketshare-forecast.html (accessed 17 November 2022).

2536 SIA. (2022). *China's share of global chip sales now surpasses Taiwan's, closing in on Europe's and Japan's*, available at: https://www.semiconductors.org/chinas-share-of-global-chip-sales-now-surpasses-taiwan-closing-in-on-europe-and-japan/ (accessed on 30 May 2023).

2537 SIA Whitepaper 2021, pp. 3, 5.

19.2.1. State Backed Fund and SOE Equity Positions in Ostensibly Private Enterprises

Ownership structures within Chinese semiconductor firms are often opaque, which complicates efforts to understand the precise role played by the Government within the sector. In recent years, the Government has sought to expand its share in domestic semiconductor firms by creating several state-backed entities that invest in companies operating in the sector. As described in greater detail in Section 19.4.1.1, China created one such fund in 2014, the National Integrated Circuit Industry Investment Fund, which is colloquially referred to as the '*Big Fund*'. The Big Fund was accompanied by the establishment of smaller sister funds at provincial and municipal levels.

This type of state-led industrial policy approach is now pervasive throughout China's emerging and critical technology sectors. Indeed, the GGFs are set up by state agencies and act as limited partnership financers that provide fresh capital and heavily impact investment decisions[2538] (see also Section 6.5). The expansion of this model has permitted the State to increase its ownership of semiconductor assets while also providing large injections of capital. The strategy incentivises Chinese technology companies as well as private investment flows to move towards government priorities–e.g., away from soft technologies, such as consumer internet services, and towards hard technologies, including semiconductors, robotics and enterprise software[2539].

19.2.2. Eight SOEs Among the Top 10 Chinese Semiconductor Firms (2020)

Eight of the top 10 Chinese semiconductor firms (ranked by revenue for 2020) are either partially or fully-owned by the State[2540]:

1. HiSilicon (Huawei Technologies Co.)[2541]
2. SMIC[2542]
3. Jiangsu Changjiang Electronics Technology ('*JCET*')[2543]

2538 MERICS Report 2021, p. 14.

2539 Goldman Sachs. (2021). *Is China investable?,* available at: https://www.goldmansachs.com/insights/pages/gs-research/is-china-investable/report.pdf (accessed on 30 May 2023).

2540 SIA. (2022). *China's share of global chip sales now surpasses Taiwan's, closing in on Europe's and Japan's*, available at: https://www.semiconductors.org/chinas-share-of-global-chip-sales-now-surpasses-taiwan-closing-in-on-europe-and-japan/ (accessed on 30 May 2023).

2541 Although Huawei has asserted that its employees own the company, through a virtual stockholding plan, 99% of shares legally reside in a state- controlled trade union, Trade Union Committee of Huawei Investment & Holding, which represents its shareholders. See Strumpf, D., & Wang, Y. (2019, April 25). *Huawei says it is employee-'owned'-but not really*. Wall Street Journal, available at: https://www.wsj.com/articles/huawei-says-it-is-employee-ownedbut-not-really-11556204552 (accessed on 26 October 2022).

2542 Due to increased participations from the Big Fund, state-owned Datang Telecom, and Tsinghua Unigroup, State participation in SMIC grew from less than 15% in 2004 to more than 45% as of 2018. See OECD Report 2019, p. 8.

2543 Following JCET's acquisition of STATS-ChipPAC in 2015–a Singapore-based firm–the State now maintains control over roughly 20–35% of JCET. See *Ibid*.

4. OmniVision[2544]
5. UNISOC[2545]
6. ZTE Corp.
7. Nexperia[2546]
8. Huada Semiconductor[2547]

For two of these firms, SMIC and UNISOC (via its parent company Tsinghua Unigroup, which defaulted on its bonds in 2021 but has been kept afloat through debt restructuring[2548]), total government backing surpassed 30% of their annual consolidated revenues[2549]. Bolstered by an increased domestic appetite for '*home-grown*' technology, spurred in part by US export controls targeting Chinese semiconductor firms, certain of these Chinese '*giants*' continued to grow their production in 2022[2550]. For instance, SMIC "*reported a 67% surge in quarterly sales in mid-2022, outpacing far larger rivals*"[2551].

In addition to state minority equity investment in private semiconductor firms, the Government has created several majority state-owned semiconductor firms, such as China Electronics Corp., ChangXin Memory Technologies and Yangtze Memory Technologies Co. These companies maintain an extensive presence in the industry, including through ownership or investment in ostensibly private firms[2552].

2544 In 2016, OmniVision was acquired by Seagull International Ltd. and Seagull Acquisition Corp. (Seagull). Seagull is composed of a multitude of state-backed investment funds that claim to pursue state objectives. See US Trade Representative. (2018). *Findings of the investigation into China's acts, policies and practices related to technology transfer, intellectual property and innovation under Section 301 of the Trade Act of 1974*, p. 119, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed on 30 May 2023).

2545 UNISOC is the chip-making unit of state-owned Tsinghua Unigroup.

2546 Nexperia, a Netherlands-based chip firm, is owned by Wingtech Technology. Nearly 30% of Wingtech's shares can be traced back to the State. See Shead, S. (2021, July 7). *The Chinese firm behind the acquisition of the UK's largest chip plant is state backed, analysis shows*. CNBC, available at: https://www.cnbc.com/2021/07/07/nexperia-owner-wingtech-is-backed-by-chinese-government-analysis-says.html (accessed on 30 May 2023).

2547 Huada Semiconductor is owned by state-owned China Electronics Corp. See OECD Report 2019, p. 57.

2548 Pan, C. (2022, July 12). *China's Tsinghua Unigroup completes debt restructuring, ownership change to keep afloat its major semiconductor operations*. South China Morning Post, available at: https://www.scmp.com/tech/big-tech/article/3185033/chinas-tsinghua-unigroup-completes-debt-restructuring-ownership (accessed on 30 May 2023); Bray, C. (2020, December 10). *China chip maker Tsinghua Unigroup to default on US $450 million bond as concerns mount over debt levels on mainland*. South China Morning Post, available at: https://www.scmp.com/business/banking-finance/article/3113357/china-chip-maker-tsinghua-unigroup-default-us450-million?module=inline&pgtype=article (accessed on 30 May 2023). As these sources reported, Tsinghua Unigroup was transferred to the Sichuan State-owned Assets Supervision and Administration Commission, with the expectation that the agency would then transfer the entity's assets to a state-owned enterprise under its control known as Sichuan Energy Industry Investment Group (SCEI). The disclosure is a slight deviation from a plan announced at the end of 2021 that said SCEI would directly take over Tsinghua Holdings.

2549 OECD Report 2019, p. 8.

2550 Liu, J. (2022, June 21). *US sanctions help China supercharge its chipmaking industry*. Bloomberg News, available at: https://www.bloomberg.com/news/articles/2022-06-20/us-sanctions-helped-china-supercharge-its-chipmaking-industry?sref=OuEBXo2C (accessed on 2 December 2023).

2551 *Ibid*.

2552 Ezell, S. (2021). *Moore's Law under attack: The impact of China's policies on global semiconductor innovation*. Information Technology & Innovation Foundation, available at:

Across all segments of the Chinese semiconductor sector, 43% of registered capital (USD 51 billion or ~EUR 43,1 billion in value) is directly or indirectly owned or controlled by the State[2553]. Notably, a 2019 OECD report revealed that state support provided by equity investment is a significant contributor to total government support directed towards China's semiconductor value chain, accounting for 86% of all state support received by the Chinese firms sampled in the report[2554]. Through such equity investments, the State is involved in nearly every aspect of the Chinese semiconductor industry as a minority or majority shareholder in virtually all medium- and large-sized semiconductor enterprises in the country[2555].

19.3. REGULATORY AND POLICY FRAMEWORK

The Government plays a key role in the development of the Chinese semiconductor industry. Measures designed to support development of the industry are pervasive, and place great emphasis on China gaining self-sufficiency in innovating new IC-related technologies[2556]. While China's policies have resulted in greater funding (and corresponding distortions) of the IC sector in China, recent allegations of corruption in the implementation of government policies and funding mechanisms have called into question the effectiveness of such measures[2557]. Top government officials are evaluating how the measures may be falling short or could be improved[2558]. This section describes the plans, directives, guidelines and other documents implemented by China in the IC sector, including the extent of influence and intervention exerted by the State over the industry.

19.3.1. 14TH FYP

19.3.1.1. 14TH FYP AND THE SEMICONDUCTOR SECTOR

The 14th FYP amplifies the Government's emphasis of technological independence and self-reliance as key goals for China's economic development[2559]. The plan specifically addresses ICs in three respects. First, the 14th FYP identifies ICs as one of eight frontier fields in which it seeks to promote research and development through the implementation of Major Scientific and

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https://itif.org/publications/2021/02/18/moores-law-under-attack-impact-chinas-policies-global-semiconductor (accessed on 30 May 2023).

2553 SIA Whitepaper 2021, p. 3.

2554 OECD Report 2019, pp. 9, 54.

2555 *Ibid.*, p. 57.

2556 See Yuan, L. (2022, August 29). *Xi Jinping's vision for tech self-reliance in China runs into reality*. New York Times, available at: https://www.nytimes.com/2022/08/29/technology/china-semiconductors-technology.html (accessed on 19 February 2023).

2557 See Reuters. (2022, August 9). *China watchdog investigates three more execs linked to chip-focused Big Fund*. https://www.reuters.com/technology/china-watchdog-investigates-three-more-execs-linked-chip-focused-big-fund-2022-08-09/ (accessed 26 October 2023).

2558 See *ibid.* See also Financial Times. (2022, September 28). *China's Big Fund corruption probe casts shadow over chip sector*, available at: https://www.ft.com/content/8358e81b-f4e7-4bad-bc08-19a77035e1b4 (accessed on 22 December 2022).

2559 National People's Congress. (2021). Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China, Recital of Part 2, available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 4 May 2023).

Technological Projects ('*Major S&T Projects*')[2560]. Second, the plan targets ICs in the context of promoting the optimisation of the manufacturing industry[2561]. In particular, the plan calls for cultivating advanced manufacturing clusters and promoting innovation and development with respect to ICs, among other areas[2562]. Third, with respect to building the digital economy, it focuses on developing high-end and neuromorphic chips as one of several frontier technologies[2563].

19.3.1.2. NATIONAL SECTOR-SPECIFIC 14TH FIVE YEARS PLAN

In addition to the overarching 14th FYP (see Section 4.2.5), China's national government has also issued sector-specific plans directly or indirectly impacting the semiconductor sector in China. This section provides examples of such sectoral plans.

19.3.1.2.1. National 14th FiveYears Plan on Informatisation

The National 14th Five Years Plan for Informatisation establishes multiple objectives relevant to the semiconductor industry in China. These include goals to make significant breakthroughs in fields relating to ICs, including basic software, equipment and materials, as well as core components[2564]. To achieve this objective, China seeks to accelerate the development of IC-related key technologies; promote the innovation of computing and storage ICs; speed up R&D for design tools, key equipment and key materials, including high-purity target materials[2565] and other products in the IC sector; and facilitate breakthroughs in manufacturing processes, including for insulated-gate bipolar transistors ('*IGBT*') and microelectromechanical systems ('*MEMS*')[2566]. The National 14th FYP for Informatisation also seeks to strengthen China's strategic research plans and the development of key fields such as artificial intelligence, quantum information, ICs, aerospace information, brain-inspired computing, neuromorphic

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2560 *Ibid.*, Part 2, Chap. 4, § 2. For additional information on the Major Scientific and Technological Projects, see Section 19.3.3.2, *National Medium- and Long-Term Science and Technology Development Plan (2006–2020)*.

2561 National People's Congress. (2021). Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China, Part 3, Chap. 8, § 3, available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 30 May 2023).

2562 *Ibid.*

2563 *Ibid.*, Part 5, Chap. 15, § 1.

2564 Central Cyberspace Affairs Committee. (2021). *14th Five-Year Plan for National Informatisation*, Arts. 2.3, 8–9, available at: http://www.cac.gov.cn/2021-12/27/c_1642205314518676.htm (accessed on 30 May 2023).

2565 High purity targets are the elemental materials for thin film deposition. See 360 Research Reports. (2023). *Global high purity target market 2023 by manufacturers, regions, type and application, forecast to 2029*, available at: https://www.360researchreports.com/global-high-purity-target-market-22286099 (accessed on 30 May 2023).

2566 Central Cyberspace Affairs Committee. (2021). *14th Five-Year Plan for National Informatisation*, Art. 4.3, pp. 21–22, available at: http://www.cac.gov.cn/2021-12/27/c_1642205314518676.htm (accessed on 30 May 2023).

chips, DNA storage, brain-computer interface, digital twins[2567], new non-volatile memory[2568], silicon-based optoelectronics and non-silicon-based semiconductors[2569]. In addition, China intends under the plan to accelerate the commercialisation for key and core information technologies in the fields of basic materials, key ICs, high-end components and new display components[2570].

19.3.1.2.2. National 14th Five Years Plan on the Digital Economy

On 22 January 2022, the State Council issued the 14th Five Years Plan for the Development of the Digital Economy, which emphasises strengthening innovation capabilities related to key technologies in the IC sector, as well as other strategic emerging industries such as sensors, quantum information, network communications, critical software, big data, artificial intelligence, blockchain and new materials[2571]. The plan also highlights the need to improve competitiveness and efficiency within the IC supply chain[2572].

19.3.1.2.3. National Five Years Plan for Strategic Emerging Industries

Although a 14th Five Years National Plan for Strategic Emerging Industries has not been made public as of writing of this Report, the 12th and 13th FYPs for SEIs provide a starting point for understanding how China seeks to cultivate its IC capabilities. Issued by the State Council in 2012, the 12th FYP for National Strategic Emerging Industries provided detailed descriptions of IC technologies identified for development, as well as a roadmap identifying goals that China sought to respectively achieve for 20 SEIs by the end of 2015 and 2020[2573]. Specifically, China's 12th FYP for National Strategic Emerging Industries provided detailed descriptions of seven strategic emerging industries (see also Section 2.3.2), including (*ii*) new generation information technology industry (*iv*) high-end equipment manufacturing industry, (*vi*) new material industry and (*vii*) new energy automobile industry[2574]. With regard to the new

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2567 A digital twin is a digital representation of a physical object, process, service or environment that behaves and looks like its counterpart in the real-world. TWI. *What is digital twin technology and how does it work?*, available at: https://www.twi-global.com/technical-knowledge/faqs/what-is-digital-twin (accessed on 30 May 2023).

2568 Non-volatile memory ('*NVM*') or non-volatile storage is defined as "*a type of computer memory that can retain stored information even after power is removed*". University of Hawaii. What are non-volatile memories and solid-state drives, available at: https://www.soest.hawaii.edu/atmo/index.php/knowledgebase/what-are-non-volatile-memories-and-solid-state-drives/#:~:text=Non%2Dvolatile%20memory%20(NVM),in%20order%20to%20retain%20data (accessed on 30 May 2023).

2569 Central Cyberspace Affairs Committee. (2021). *14th Five-Year Plan for National Informatisation*, Art. 4.3, p. 22, available at: http://www.cac.gov.cn/2021-12/27/c_1642205314518676.htm (accessed on 30 May 2023).

2570 *Ibid.*, Art. 4.4, p. 25.

2571 State Council of the People's Republic of China ('*State Council*'). (2022). *14th Five-Year Plan for the Development of Digital Economy*, Art. 6.1, available at: http://www.gov.cn/zhengce/zhengceku/2022-01/12/content_5667817.htm (accessed on 30 May 2023).

2572 *Ibid.*, Art. 6.2.

2573 State Council. (2012). *12 th Five-Year Plan for National Strategic Emerging Industries*, available at: http://www.gov.cn/zwgk/2012-07/20/content_2187770.htm (accessed on 30 May 2023).

2574 *Ibid.*

generation information technology industry, the plan specifically focused on the development of ICs[2575].

The 13th FYP for National Strategic Emerging Industries, issued by the State Council in 2016, further emphasised accelerating the expansion of the SEIs[2576]. With regard to ICs, the plan called for accelerating the industrialization of the 16/14 nanometre process as well as the construction of memory production lines, improving the technical level and industrial concentration of the packaging and testing industry and improving the planned layout of chip-related fields[2577]. The 13th FYP for National Strategic Emerging Industries also expanded the SEIs identified in the 12th FYP by adding to the list the '*digital creation industry*'[2578].

The SEI Decision (Section 2.3.2), identified seven '*strategic emerging industries*' that China aimed to promote through central planning[2579]. The State Information Center ('*SIC*') – a public institution directly affiliated with the *NDRC* – released Parts 1 and 2 of the Judgment on the Situation of Strategic Emerging Industries and Development Suggestions for the 14th Five Years Period in December 2020 and January 2021, respectively[2580]. Among other things, Part 2 states that "*China shall take advantage of its system for mobilizing the resources nationwide, increase investment and focus on tackling problems to make breakthroughs in major 'stranglehold' sectors*" within China's SEIs, including with respect to basic manufacturing processes, core equipment and high-end functional IC materials[2581].

19.3.2. Sub-National 14th Five Years Plans

As explained in Chapter 4 for each five-year plan period, sub-national entities – e.g. provinces and municipalities – issue their own corresponding plans, and many of them identify ICs as a priority field for development. The sections below address sub-national plans, including sector-specific plans, issued by sub-national governments, and discuss some ways in which they impact the semiconductor industry.

19.3.2.1. Overarching Sub-National 14th Five Years Plans

19.3.2.1.1. Beijing

The *Beijing 14th Five Years Plan for National Economic and Social Development and Long-Range Objectives for 2035* focuses on creating an innovation ecosystem for the entire supply

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2575 *Ibid.*, Art. 3(2). New displays refer to new-generation display technologies such as organic light-emitting diodes ('*OLEDs*'), three-dimensional stereoscopic (3D) and laser displays. High-end software refers to basic software represented by networked operating system software and massive data processing software.

2576 State Council. (2016). *13th Five-Year Plan for National Strategic Emerging Industries*, available at: http://www.gov.cn/zhengce/content/2016-12/19/content_5150090.htm (accessed on 30 May 2023).

2577 *Ibid.*

2578 *Ibid.*

2579 State Council. (2010). Decision of the State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries, available at: http://www.gov.cn/zwgk/2010-10/18/content_1724848.htm (accessed on 30 May 2023).

2580 National Development and Reform Commission ('*NDRC*'). (2021). *Judgment on the Situation of Strategic Emerging Industries and Development Suggestions for the 14th Five-Year Period (Part 1)*, available at: https://www.ndrc.gov.cn/xxgk/jd/wsdwhfz/202101/t20210104_1264124.html?code=&state=123 (accessed on 30 May 2023).

2581 *Ibid.*, Part 2, 3.2.

chain of the IC industry, including design, equipment, chip manufacturing and developing intellectual property portfolios and software tools[2582]. It includes the following elements:

- Building technology parks to promote the development of IC technology through financial support, tax incentives and other support instruments[2583]. These parks include the Zhongguancun Integrated Circuit Design Park Phase II, China Mobile International Information Port, Beijing Economic and Technological Development Zone Integrated Circuit Equipment Industrial Base Phase II and the National Information Technology Application Innovation Park[2584].
- Supporting a number of breakthrough projects in areas including advanced processing technology, manufacturing materials, electronic design automation and carbon-based ICs[2585].
- Implementing and supporting new projects for IC manufacturing, including the launch of eight-inch wafer production lines and eight-inch MEMS high-end production lines[2586].

19.3.2.1.2. Shanghai

Shanghai's 14th Five Years Plan for National Economic and Social Development and Long-Range Objectives for 2035 (the '*Shanghai 14th FYP*') lists the IC industry as one of three industries that can play a leading role in innovation development[2587]. In particular, the Shanghai 14th FYP aims to create a comprehensive industrial ecosystem for ICs[2588]. With an emphasis on R&D, the plan also seeks to strengthen industry supply chain coordination in the Yangtze River Delta to gradually form a comprehensive IC industry cluster[2589].

19.3.2.1.3. Jiangsu Province

2582 Beijing Municipal People's Congress. (2021). *Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Beijing*, Part 7, Chap. 4, p. 98, available at: https://www.ndrc.gov.cn/fggz/fzzlgh/dffzgh/202103/P020210331517775703990.pdf (accessed on 30 May 2023).

2583 *Ibid.*, Part 7, Chap. 4, p. 98; EEWORLD. (2019, January 5). *Beijing Haidian integrated circuit industry multi-policy "blessing"* , available at: http://news.eeworld.com.cn/xfdz/2019/ic-news010592597.html (accessed on 30 May 2023).

2584 Beijing Municipal People's Congress. (2021). *Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Beijing*, Part 7, Chap. 4, p. 98, available at: https://www.ndrc.gov.cn/fggz/fzzlgh/dffzgh/202103/P020210331517775703990.pdf (accessed 30 May 2023).

2585 *Ibid.*

2586 *Ibid.*, Part 7, Chap. 4, pp. 98–99.

2587 Shanghai Municipal People's Congress. (2021). *Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Shanghai*, Art. 5.1, available at: https://www.shanghai.gov.cn/nw12344/20210129/ced9958c16294feab926754394d9db91.html (accessed on 30 May 2023).

2588 *Ibid.*, Art. 5.1.1.

2589 *Ibid.* This Shanghai 14th FYP also lists the goals or focuses that the Shanghai government decided to reach during the next 5-year period, though it does not address financing of those policy goals. As an example of one incentive, Shanghai stated it would subsidize up to 30% of investment in semiconductor projects, up to a total of RMB 100 million (~EUR 14.13 million). Pan, C. (2022, January 19). *US-China tech war: Shanghai to woo semiconductor talent and support local chip development with shower of cash*. South China Morning Post, available at: https://www.scmp.com/tech/tech-war/article/3163966/us-china-tech-war-shanghai-showers-cash-woo-semiconductor-talent-and (accessed on 30 May 2023).

In its 14th Five Years Plan for National Economic and Social Development and Long-Range Objectives for 2035[2590], the Jiangsu Province targets RMB 6 trillion (~EUR 787,2 billion) in gross production by 2025 across a series of advanced manufacturing clusters that target, among a number of other areas, ICs and new displays[2591].

19.3.2.1.4. Zhejiang Province

Zhejiang Province's 14th Five Years Plan for National Economic and Social Development and Long-Range Objectives for 2035 (the '*Zhejiang 14th FYP*')[2592] proposes focusing on 10 major industrial chains, which include among them ICs and chip-related technologies[2593]. The Zhejiang 14th FYP calls for accelerating the development of new material industries[2594], focusing on key strategic materials such as advanced semiconductor materials and deploying future technologies such as third-generation semiconductors, brain-like chips and flexible electronics[2595].

19.3.2.1.5. Hubei Province

Hubei Province's 14th Five Years Plan for National Economic and Social Development and Long-Range Objectives for 2035 plans to promote the construction of "four major national strategic emerging industry clusters", including an industry cluster focused on ICs[2596]. It also seeks to promote the development of "four key industrial bases" including a national memory-chip industrial base[2597].

2590 Jiangsu Provincial People's Congress. (2021). Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Jiangsu Province, available at: http://www.jiangsu.gov.cn/module/download/downfile.jsp?classid=0&filename=374bdc63eccc44bbb0319ec17fda14d1.pdf (accessed 30 May 2023).

2591 *Ibid.*, Part 3, Chap. 8, § 1, p. 25.

2592 Zhejiang Provincial People's Congress. (2021). Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Zhejiang Province, available at: https://www.ndrc.gov.cn/fggz/fzzlgh/dffzgh/202104/P020210408556620977681.pdf (accessed on 30 May 2023).

2593 *Ibid.*, Part 3, p. 21.

2594 New materials refer to newly emergent materials with exceptional properties or special functions, or materials with significantly improved performance or new functions after the improvement of traditional materials. According to the *Classification of Strategic Emerging Industries* catalogue issued by the National Bureau of Statistics, the new material industry can be subdivided into advanced steel materials, advanced non-ferrous metal materials, advanced petrochemical new materials, advanced inorganic non-metallic materials, high-performance fibres and products and composite materials, cutting-edge new materials and new material related services. Zhejiang Provincial People's Congress. (2021). *Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Zhejiang Province*, Part 3, p. 23, available at: https://www.ndrc.gov.cn/fggz/fzzlgh/dffzgh/202104/P020210408556620977681.pdf (accessed on 30 May 2023).

2595 *Ibid.*

2596 Hubei Provincial People's Congress. (2021). Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of Hubei Province, Chap. 3, § 2, available at: http://czt.hubei.gov.cn/bmdt/ztzl/dfzfzqzl_6968/xxpl/202110/P020211019555986886394.pdf (accessed on 31 May 2023).

2597 Hubei Daily. (2021, January 28). *Enhancing the resilience of industries is essential for building a strong manufacturing province*, available at: http://news.cnhubei.com/content/2021-01/28/content_13600479.html (accessed on 31 May 2023).

19.3.2.2. SECTOR-SPECIFIC SUB-NATIONAL 14TH FIVE YEARS PLANS AND ACTION PLANS

Further to their general 14th FYPs, many sub-national governments have issued their sector-specific plans to implement central-level plans and policy programs within their jurisdictions.

19.3.2.2.1. Sub-National 14th Five Years Plans on Informatisation

Certain sub-national governments in China have developed and issued their own 14th FYPs for Informatisation. For example, in June 2022, Guangzhou issued the 14th FYP for Industry and Informatisation Development in Guangzhou[2598]. In the same month, Hebei issued its 14th FYP for Informatisation[2599], and in May 2022, Chengdu City of Sichuan issued its 14th FYP for Informatisation[2600].

As an example, Guangzhou's plan seeks to build a core zone for IC development and further develop its IC design, manufacturing, packaging and testing, materials and equipment capabilities[2601]. The plan discusses developing an industry cluster for semiconductors and ICs and providing special funds to support IC development[2602].

19.3.2.2.2. Sub-National 14th Five Years Plans on the Digital Economy

Several sub-national governments have also issued 14th FYPs on the digital economy. As an example, on 13 December 2021, Chongqing issued the 14th FYP for the Development of the Digital Economy in Chongqing (2021–2025)[2603]. One of the priorities mentioned in this plan is the development of an IC industry cluster. As part of this initiative, Chongqing will accelerate the building of a municipal manufacturing innovation centre and promote the development of major projects such as the 12-inch power semiconductor project of China Resources Microelectronics, as well as an R&D centre known as the CUMEC project[2604]. The plan indicates that Chongqing will also adopt specific approaches to developing the design, manufacturing, packaging and testing of ICs[2605]. In addition to Chongqing, other governments,

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2598 Guangzhou People's Government. (2022). *14th FYP for Industry and Informatisation Development in Guangzhou* (2022, June 2), available at: https://www.gz.gov.cn/zwgk/fggw/sfbgtwj/content/post_8319334.html (accessed on 31 May 2023).

2599 Hebei Provincial Cybersecurity and Informatisation Commission. (2022). *14th FYP for Informatisation in Hebei*, available at: http://www.caheb.gov.cn/system/2022/06/30/030174590.shtml (accessed on 31 May 2023).

2600 Chengdu Cyberspace Administration. (2022). *14th FYP for Informatisation in Chengdu*, available at: http://cddrc.chengdu.gov.cn/cdfgw/c147315/2022-06/16/35d226e663e84509a4c5bfa52654e473/files/26e5a973ac4247f6ae576e4db38f0793.pdf (accessed on 31 May 2023).

2601 Guangzhou People's Government. (2022). *14th Five-Year Plan for Informatisation in Guangzhou*, Art. 3.1.1, available at: https://www.gz.gov.cn/zwgk/fggw/sfbgtwj/content/post_8319334.html (accessed on 31 May 2023).

2602 *Ibid.*

2603 Chongqing People's Government. (2021). *14th Five-Year Plan for Development of Digital Economy in Chongqing (2021–2025)*, available at: https://fzggw.cq.gov.cn/zfxxgk/fdzdgknr/ghxx/zxgh/202112/t20211213_10156527.html (accessed on 31 May 2023).

2604 *Ibid.* Based on the information published on the website of CUMEC, it was established by the Chongqing municipal government. *Ibid.* See also CUMEC. *Company profile*, available at: http://www.cumec.cn/menu_18.html (accessed on 31 May 2023).

2605 *Ibid.*, Art. 5.1.

including Shanghai[2606] and Zhejiang[2607], have issued local 14th FYPs on the digital economy for their jurisdictions.

19.3.2.2.3. Sub-National 14th Five Years Plans on Strategic Emerging Industries

Many sub-national governments such as Hunan[2608], Fujian[2609], Shanghai[2610], Guangzhou[2611] and Chongqing[2612] issued their own 14th FYPs for Strategic Emerging Industries. As an example, Fujian's 14th FYP on Strategic Emerging Industries was issued in October 2021[2613]. Under this plan, Fujian will focus on the development of high-performance ICs, as part of the new generation information technology industry[2614] and will develop IC innovation platforms and IC industry clusters[2615]. By 2025, Fujian strives to achieve an added value of RMB 1 trillion (~EUR 131.2 billion) in strategic emerging industries, with the goal that these industries will represent 17% of the region's total economic output and 23% of the region's industrial output by that year[2616].

19.3.2.2.4. Sub-National Action Plans

Sub-national governments have also issued a series of '*action plans*' related to the development of the IC industry. For example, in October 2020, Guangdong issued the Action Plan for Fostering Semiconductor and IC-Related Strategic Emerging Industry Clusters (2021–2025)[2617]

2606 The General Affairs Office of Shanghai Municipal People's Government. (2022). *14th Five-Year Plan for the Development of Digital Economy in Shanghai,* available at: http://new.tzxm.gov.cn/zckd/fzgh/202207/t20220715_1330797.shtml (accessed on 31 May 2023).

2607 The General Affairs Office of Zhejiang Provincial People's Government. (2021). *14th Five-Year Plan for the Development of Digital Economy in Zhejiang Province,* available at: https://www.zj.gov.cn/art/2021/6/29/art_1229019365_2306544.html (accessed on 31 May 2023).

2608 The General Affairs Office of Hunan Provincial People's Government. (2021). *14th Five-Year Plan for the Development of Strategic Emerging Industries in Hunan Province*, available at: http://www.hunan.gov.cn/hnszf/xxgk/wjk/szfbgt/202108/t20210825_20396613.html (accessed on 31 May 2023).

2609 Fujian Provincial People's Government. (2021). *14th FYP for Development of Strategic Emerging Industries in Fujian Province*, available at: http://www.fujian.gov.cn/zwgk/ztzl/gjcjgxgg/zc/202110/P020211029381889347681.pdf (accessed on 31 May 2023).

2610 The General Affairs Office of Shanghai Municipal People's Government. (2021). *14th Five-Year Plan for the development of strategic emerging industries and leading industries in Shanghai*, available at: https://www.shanghai.gov.cn/nw12344/20210721/d684ff525ead40d8a2dfa51e541a14e4.html (accessed on 31 May 2023).

2611 The General Affairs Office of Guangzhou Municipal People's Government. (2022). *14th Five-Year Plan for the Development of Strategic Emerging Industries in Guangzhou*, available at: https://www.gzdcia.org.cn/?zcfg/52.html (accessed on 13 June 2023).

2612 The Chongqing Municipal People's Government. (2022). *14th Five-Year Plan for the Development of Strategic Emerging Industries in Chongqing (2021–2025)*, available at: http://www.cq.gov.cn/zwgk/zfxxgkml/wlzcxx/qyjf/wqszf/202203/t20220321_10531169.html (accessed on 31 May 2023).

2613 *Ibid.*

2614 *Ibid.*, chap. 3, sec. 1. at 15–20.

2615 *Ibid.*, at 20.

2616 *Ibid.* at 13.

2617 Guangdong Provincial Department of Industry and Information Technology. (2020). *Action Plan for Fostering Semiconductor and IC-Related Strategic Emerging Industry Clusters in Guangdong Province (2021–2025)*, available at: http://www.gd.gov.cn/zwgk/jhgh/content/post_3097925.html (accessed on 31 May 2023).

('*Guangdong Action Plan*'). According to the plan, Guangdong aims by 2025 to increase the size and innovative capabilities of the IC industry, as well as improve the industry's capabilities and layout[2618]. Guangdong also seeks to achieve annual revenue of more than RMB 400 billion (~EUR 50,8 billion) for IC-related strategic emerging industries by 2025, with an annual growth rate of more than 20%[2619]. Specifically, Guangdong seeks, among other things, to *(i)* achieve in the IC design sector annual revenue of more than RMB 200 billion (~EUR 25,4 billion); *(ii)* develop three or more design companies with annual revenue greater than RMB 10 billion (~EUR 1,3 billion) as well as a number of smaller design companies with annual revenue of more than RMB 1 billion (~EUR 127 million); *(iii)* achieve annual revenue of more than RMB 100 billion (~EUR 12,7 billion) in the IC manufacturing sector; *(iv)* significantly increase the number of ATP businesses; *(v)* achieve a leading national role with respect to the province's manufacturing capacity in certain compound semiconductor materials and devices and *(vi)* facilitate the development of special equipment, parts and components[2620]. To achieve these goals, Guangdong Province plans to increase financial support for these activities. For example, the Provincial S&T Innovation Strategy Special Fund will invest at least RMB 1 billion (~EUR 127 million) to support technological innovation in the IC industry[2621]. The Guangdong Action Plan also encouraged the creation of the Provincial Industrial Development Fund, the Innovation and Entrepreneurship Fund and related special funds to strengthen their support of the IC industry[2622].

Another example of a local action plan targeting growth in the IC sector is the Shenzhen Action Plan (2019–2023) for Further Promoting the Development of the Integrated Circuit Industry ('*Shenzhen Action Plan*') issued by the municipal government of Shenzhen on 15 May 2019[2623]. This plan stated that, by 2023, Shenzhen will build an IC industry cluster with international competitiveness, significantly increase the scale of the industry in Shenzhen to exceed 200 billion yuan in sales revenue as well as introduce or cultivate 10 '*backbone*' enterprises with sales revenue of more than 2 billion yuan[2624]. In addition, the plan states that Shenzhen will prioritize the development of third-generation semiconductors and promote breakthroughs in key and core technologies[2625].

19.3.3. Other Relevant Policy Frameworks and Initiatives

19.3.3.1. Made in China 2025

2618 *Ibid.*, Art. 2.
2619 *Ibid.*
2620 *Ibid.*
2621 *Ibid.*, Art. 5.2.
2622 *Ibid.*, Art. 5.2.
2623 Shenzhen People's Government. (2019). *Shenzhen Action Plan (2019-2023) for Further Promoting the Development of the Integrated Circuit Industry*, available at: http://www.sz.gov.cn/zfgb/2019/gb1100/content/post_5017853.html (accessed on 31 May 2023).
2624 *Ibid.*, Art. 2.
2625 *Ibid.*, Art. 3.3, 3.4.

ICs and IC equipment constitute a subcategory of the "*new generation information technology industry*" one of the 10 industries targeted for breakthroughs under Made in China 2025[2626] (see Chapter 4.2.3).

According to the *Made in China 2025 Key Technology Roadmap*, a document issued to assist with the implementation of MIC 2025, the main purpose of developing the IC industry in China is to ensure that the country is able to achieve self-sufficiency and satisfy its national security needs[2627]. The *Key Technology Roadmap* establishes specific output value targets, and also set targets for satisfying certain levels of domestic demand–specifically 49% by 2020 and 75% by 2030[2628]. It further elaborates on the prioritisation of IC technologies and relevant materials and equipment and recommends employing national support policies to achieve the stated goals. This prioritisation is taken into account in the central and sub-central implementing policy measures (see Chapter 4).

19.3.3.2. National Medium- and Long-Term Science and Technology Development Plan (2006-2020)

In 2006, the State Council issued the S&T MLP[2629], setting up a fifteen-year blueprint for technological innovation. The Outline establishes sixteen Major S&T Projects, which are broad-based initiatives that aim "*to achieve national goals and, through core technology breakthroughs and resource integration, to generate major strategic products, key common technologies and major projects . . . which are top priorities for China's scientific and technological development*"[2630]. The State Council's 13th Five Years National Science and Technology Innovation Plan, issued in 2016, extended the Major S&T Projects Program to 2030 and sought to accelerate the implementation of these projects[2631].

Among the sixteen Major S&T Projects established by the S&T MLP, two projects are directly related to the IC industry. One is the "*Core, High and Basic*" Project, which focuses on promoting technological innovation relating to "*core electronic devices, high-end general-purpose chips and basic software*"[2632]. The second project is the "*Very Large Scale Integrated Circuit Manufacturing Equipment and Complete Set of Processes*" Project, which aims to (i) develop key IC manufacturing equipment and a complete set of advanced manufacturing

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2626 State Council. (2015). *Made in China 2025*, Art. 3.6.1, available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 31 May 2023).

2627 National Manufacturing Strategy Advisory Committee. (2015). *Made in China 2025 Key Technology Roadmap*, Art. 1.1.1, p. 1, available at: http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 31 May 2023).

2628 *Ibid.*

2629 State Council. (2006). *Outline of the National Medium- and Long-Term Science and Technology Development Plan (2006–2020)*, available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 31 May 2023).

2630 State Council. (2006). *Outline of the National Medium- and Long-Term Science and Technology Development Plan (2006–2020)*, Chap. 4, available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 31 May 2023).

2631 State Council. (2016). *13th Five-Year National Science and Technology Innovation Plan*, available at: http://www.gov.cn/zhengce/content/2016-08/08/content_5098072.htm (accessed on 31 May 2023).

2632 State Council. (2006). *Outline of the National Medium- and Long-Term Science and Technology Development Plan (2006-2020)*, Chap. 4, available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 31 May 2023).

process with independent intellectual property rights; (ii) reduce dependencies on imports for China's high-end IC manufacturing; and (iii) develop equipment, materials, packaging and testing for 28–14 nanometre ICs and other large-scale ICs[2633].

19.3.3.3. Guidelines to Promote National Integrated Circuit Industry Development (2014)

The *Guidelines to Promote National Integrated Circuit Industry Development* (the '*2014 Guidelines*') were enacted by the State Council in 2014 to accelerate the development of China's fledgling semiconductor industry; they were a central feature in China's efforts to catch up with leading economies in the sector[2634]. After the release of the 2014 Guidelines, the Government established the Big Fund (see Section 19.2.1.1)[2635].

The 2014 Guidelines emphasise the strategic significance of the semiconductor industry to economic and social development in China and highlight policymakers' view that developing the industry was a national security priority[2636]. At the same time, the 2014 Guidelines reflect upon weaknesses identified in the domestic industry, including weak sustained innovation, insufficient market demand, an incomplete supply chain and low global competitiveness[2637].

The 2014 Guidelines also set out goals for the development of the semiconductor industry in China. First, the Guidelines seek to establish a financing platform as well as a friendly policy environment by 2015[2638]. Second, the Guidelines seek to gradually close the gap in development between China's industry and the broader global market by 2020[2639]. Third, the Guidelines promote the adoption of advanced global standards in major areas of the semiconductor industrial chain, and the transformation of a number of domestic IC enterprises into first-tier global competitors by 2030[2640].

The 2014 Guidelines also identify IC design, manufacturing, packaging and testing and key equipment and materials as development priorities[2641]. The guidelines propose a series of approaches and measures to achieve these priorities, including:

2633 *Ibid.*; State Council Information Office. (2017). Press conference by Ministry of Science and Technology on very large scale integrated circuit manufacturing equipment and complete set of processes, available at: http://www.scio.gov.cn/xwfbh/gbwxwfbh/xwfbh/kjb/Document/1553307/1553307.htm (accessed on 8 June 2023).

2634 State Council. (2014). *Guidelines to Promote National Integrated Circuit Industry Development*, available at: http://www.csemi.com/uploads/soft/190223/chanyeguihua/3.pdf (accessed on 31 May 2023); *see* also Xinhua News. (2014, June 24). *State Council issued the Guidelines to Promote National Integrated Circuit Industry Development*, available at: http://www.gov.cn/xinwen/2014-06/24/content_2707281.htm (accessed on 31 May 2023).

2635 Xinhua News. (2014, October 14). *National Integrated Circuit Industry Investment Fund is formally founded*, available at: http://www.gov.cn/xinwen/2014-10/14/content_2764849.htm (accessed on 31 May 2023).

2636 State Council. (2014). *Guidelines to Promote National Integrated Circuit Industry Development*, p., available at:. http://www.csemi.com/uploads/soft/190223/chanyeguihua/3.pdf (accessed on 31 May 2023).

2637 *Ibid.*, §§ 1–2, pp. 1–2.

2638 *Ibid.*, § 2.3, p. 2.

2639 *Ibid.*

2640 *Ibid.*

2641 *Ibid.*, § 3, pp. 2–3.

- Central Leadership (e.g., setting up the '*Leading Group for National IC Industry Development*')[2642];
- National Funding (e.g., the establishment of the Big Fund to absorb capital from large enterprises and financial institutions and gather private capital to provide support for the development of the semiconductor industry)[2643];
- Other Financial Support (e.g., policy-oriented financing and commercial financing tools)[2644];
- Tax Support Policies (e.g., preferential income tax, value-added tax, business tax and other tax policies)[2645];
- Promotion and Application of Key IC products (e.g., government procurement)[2646];
- Industrial Integration (e.g., encouraging collaboration between enterprises and research institutes and vertical integration in the industry)[2647];
- Talent Cultivation and Recruitment[2648]; and
- Optimising the Environment for Foreign Investment[2649].

To date, although there has been no government assessment of progress towards the objectives set out in the 2014 Guidelines, some public assessments have suggested that certain targets set forth in the 2014 Guidelines were reached in 2021 and 2022[2650].

2642 Pursuant to the 2014 Guidelines, the Leading Group for National IC Industry Development is responsible for performing overall planning and coordination, strengthening top-level design, integrating and mobilizing resources and solving major problems, in respect of the promotion of IC industry development. Public information about this Leading Group is quite limited. Based on online news reports and articles, this Leading Group was established in 2014 and supported by an expert advisory committee, and remained in existence at least until 2019. It is not clear whether it still exists. The first director of this Leading Group was Ma Kai, the then-Vice Prime Minister of China, and its then-deputy director was Miao Wei, the then-head of MIIT. The members of the Leading Group through the end of 2017 at least included the NDRC, Ministry of Finance, and Ministry of Science and Technology. *See* State Council. (2014). *Guidelines to Promote National Integrated Circuit Industry Development*, § 4.1, available at: http://www.csemi.com/uploads/soft/190223/chanyeguihua/3.pdf (accessed on 31 May 2023); CENA. (2015, February 9). *Review and prospect on innovative development of safe and reliable software and hardware of China in 2014*, available at: http://www.cena.com.cn/industrynews/20150209/62373.html (accessed on 31 May 2023); National IC Design Shenzhen Industrial Center. (2019). *Notice on 2019 China (Shenzhen) integrated circuit summit*, available at: https://www.szicc.net/html/201906/14238072.html (accessed on 31 May 2023); SINA.cn. (2017, December 28). *Expert meeting of National IC Industry Development Consultation Committee was held in Beijing*, available at: https://news.sina.cn/2017-12-28/detail-ifyqcsft7704716.d.html (accessed on 31 May 2023).

2643 State Council. (2014). *Guidelines to Promote National Integrated Circuit Industry Development*, § 4.2, available at: http://www.csemi.com/uploads/soft/190223/chanyeguihua/3.pdf (accessed on 31 May 2023).

2644 *Ibid.*, § 4.3, p. 3.

2645 *Ibid.*, § 4.4, p. 3.

2646 *Ibid.*, § 4.5, p. 3.

2647 *Ibid.*, § 4.6, pp. 3–4.

2648 *Ibid.*, § 4.7, p. 4.

2649 *Ibid.*, § 4.8, p. 4.

2650 For example, the 2014 Guidelines set numerical targets establishing that, by 2015, the sales revenue of the IC industry should exceed RMB 350 billion (~EUR 42.8 billion), and that by 2020, the average annual growth rate of sales revenue would exceed 20%. According to an industry report, by the end of March 2021 both goals had been achieved. *See* Quianzhan Industry Research Institute. (2021, April 12). *Collect! Prospects for the development of China's integrated circuit industry during the '14th Five-Year Plan'-Focus on technology, research and development, and wide bandgap semiconductors*, available at:

19.3.3.4. Policies for Encouraging the Development of the Software Industry and the IC Industry (2000, 2011 and 2020)

The State Council also issued a number of Circulars of the State Council on Several Policies for Encouraging the Development of the Software Industry and the Integrated Circuit Industry. These included circulars issued in 2000 (*'2000 Circular'*)[2651], 2011 (*'2011 Circular'*)[2652] and 2020 (*'2020 Circular'*)[2653]. Each circular laid out several support measures designed to encourage the development of the semiconductor industry, including preferential financing and tax policies; investment and lending policies; R&D policies; import and export policies; and intellectual property, antitrust and talent policies[2654].

The support measures, such as preferential taxation, investment supports, loan supports and talent incentives set out in these circulars have evolved over time, adapting to technological development and policymakers' shifting goals, but their importance in China's policy toolkit continue unabated.

19.3.3.5. Catalogue of Industries Encouraging Foreign Investment

Several aspects of the semiconductor industry are treated as *'encouraged'* under the *Catalogue of Industries Encouraging Foreign Investment*. They include:

- IC design;
- Manufacturing of large-scale digital ICs with line widths of 28 nm and below;
- Manufacturing of analogue and digital-analogue ICs of 0.11 micron and below;
- Manufacturing of MEMS and compound ICs;
- Advanced packaging and testing;
- Development and manufacturing of key equipment for Very Large Scale Integrated Circuit (*'VLSI'*) manufacturing;
- Manufacturing of IC packaging and testing equipment;
- Manufacturing of compound semiconductor materials; and
- High-performance photoresist development and production[2655].

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https://www.qianzhan.com/analyst/detail/220/210412-727ccb7a.html (accessed on 2 June 2023). In addition, the 2014 Guidelines also set numerical targets establishing that the 32/28 nm and 16/14 nm manufacturing processes would achieve mass production by 2015 and 2020, respectively. Again, industry reports indicate that Shanghai announced in 2020 that the 14 nm advanced manufacturing process realized mass production. Global Semiconductor Watch. (2022, September 15). *The scale of the integrated circuit industry has reached 250 billion, and Shanghai-14nm advanced manufacturing process has achieved mass production*, available at: https://www.esmchina.com/marketnews/40716.html (accessed on 2 June 2023).

2651 State Council. (2000). Circular of the State Council on Several Policies for Encouraging the Development of the Software Industry and the Integrated Circuit Industry, available at: http://www.gov.cn/gongbao/content/2000/content_60310.htm (accessed on 2 June 2023).

2652 State Council. (2011). Circular of the State Council on Several Policies for Encouraging the Development of the Software Industry and the Integrated Circuit Industry, available at: http://www.gov.cn/zwgk/2011-02/09/content_1800432.htm (accessed on 2 June 2023).

2653 State Council. (2020). Circular of the State Council on Several Policies for Encouraging the Development of the Software Industry and the Integrated Circuit Industry in the New Era, available at: https://www.miit.gov.cn/xwdt/szyw/art/2020/art_b5059afaa450422a820648c635d653f6.html (accessed on 2 June 2023).

2654 *Ibid.*, Arts. 1–7.

2655 NDRC. (2022). *Catalogue of Industries Encouraging Foreign Investment (2021 Version)*, Arts. 330, 333, 334, 368, 369, available at: http://images.mofcom.gov.cn/wzs/202210/20221028105849222.pdf (accessed on 2 June 2023).

In the past, industries where foreign investment was encouraged, restricted, or prohibited were listed in a single catalogue[2656]. It has since been divided into a catalogue of encouraged industries, referenced above, and a negative list for foreign investment [2657]. The negative list does not currently include areas directly related to the semiconductor industry[2658].

19.3.3.6. INDUSTRY STRUCTURE ADJUSTMENT

As early as 2005, China set as one of its economic development goals optimizing and upgrading the country's industrial structure, with Decision No. 40 (see Section 4.2.9)listing also the IC sector as one key area for development[2659]. The State Council further authorized NDRC to develop a Guidance Catalogue for Industrial Structure Adjustment to guide investment and empower government agencies to manage investment projects and formulate and implement policies on finance, taxation, credit loans, land supply and import and export. NDRC was also authorized to revise the Guidance Catalogue for Industrial Structure Adjustment to account for developments over time[2660]. NDRC first issued the Guidance Catalogue for Industrial Structure Adjustment in 2005, and revised it in 2011, 2019 and 2024 (see Section 4.2.9). Each revision continues to list several segments of the IC supply chain as encouraged areas.

19.4. STATE SUPPORT MEASURES / INCENTIVES

The Government employs a variety of policy measures to promote China's IC industry. These measures take the form of support by investment funds (such as the Big Fund), as well as industry-specific tax relief, grants and discounted lending[2661]. Recipients of state support include not only large Chinese industry leaders, but also smaller firms. Indeed, through the Specialised and Sophisticated Enterprises Program (also known as the 'little giants' program, see (Section 2.3.2), the Government provides select Chinese small- and medium- sized enterprises in strategic industries like semiconductors with special government support[2662].

2656 NDRC. (2015). *Guiding Catalogue for Industries of Foreign Investment (2015 Version)*, available at: https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/201503/W020190905494968937613.pdf (accessed on 2 June 2023).

2657 NDRC. (2021). *Special Administrative Measures for Foreign Investment Access (Negative List) (2021 Version)*, available at: http://www.gov.cn/zhengce/zhengceku/2021-12/28/content_5664886.htm (accessed on 2 June 2023).

2658 *Ibid*.

2659 State Council. (2005). *Decision of the State Council on Issuing and Implementing the Interim Regulations on Promoting Industry Structure Adjustment,* Arts. 6, 7, 12, available at: http://www.gov.cn/zhengce/content/2008-03/28/content_2020.htm (accessed on 2 June 2023).

2660 *Ibid*.

2661 State Council. (2020). *Several Policies for Promoting High Quality Development of IC Industry and Software Industry in the New Era*, Arts. 1, 2.11, available at: http://www.gov.cn/zhengce/content/2020-08/04/content_5532370.htm (accessed on 2 June 2023); Shanghai People's Government. (2021). *Several Policies for Promoting High Quality Development of Shanghai's IC Industry and Software Industry in the New Era*, Arts. 13, 16, 18, 20, available at: https://www.shanghai.gov.cn/202204zfwj/20220221/c3a8b23b2e464aaba758c5c9f0b8b80f.html (accessed on 2 June 2023); Xinhua News. (2014, October 14). *Establishment of National IC Industry Investment Fund*, available at: http://www.gov.cn/xinwen/2014-10/14/content_2764849.htm (accessed on 2 June 2023).

2662 MIIT. (2021). Notice of General Office of MIIT on Work Concerning Fostering of Third Batch of Specialised and Sophisticated *'Little Giant'* Enterprises, available at: http://www.gov.cn/zhengce/zhengceku/2021-04/22/content_5601309.htm (accessed on 2 June 2023).

Such support measures include financial support, reduced taxation, credit and direct financing[2663].

According to SIA, China's policy measures "have the potential to (1) artificially inflate market demand for China's indigenous semiconductor products; (2) gradually restrict or block market access for foreign semiconductor products as competing domestic products emerge; (3) force the transfer of technology and (4) grow non-market based domestic capacity, thereby disrupting the fabric of the global semiconductor value chain"[2664].

19.4.1. GOVERNMENT GUIDANCE FUNDS

China operates three types of government-backed investment funds (see also Section 6.5) of relevance to the semiconductor industry: *(i)* government venture capital funds, *(ii)* government investment funds and *(iii)* government-funded industry investment funds. Each of these is described in greater detail below.

Government venture capital funds refer to venture capital funds jointly initiated and established by the central and sub-national governments, and in some cases, private capital, where the Government contributes capital from special funds such as industrial technology research and development funds[2665]. This type of fund can also refer to a situation in which the government participates in an existing venture capital fund by making contributions to and increasing the capital of that fund[2666]. These funds typically target supporting start-ups as well as smaller enterprises[2667].

Government investment funds and government-funded industrial investment funds are established by governments at all levels through budgetary arrangements, with separate capital contributions or joint funding with private capital (see Section 6.5). These funds use market-oriented methods to guide private capital to invest in key areas of the economy and support the development of targeted industries and fields[2668].

2663 Economic Information Daily. (2021, June 22). *Funding portfolio to support specialised and sophisticated medium-and-small enterprises*, available at: http://www.jjckb.cn/2021-06/22/c_1310020664.htm (accessed on 2 June7 2023); Nemeth, J. (2022). *Who are the little giants? Chinese tech SME program in the spotlight again*. US-China Business Council, available at: https://www.uschina.org/sites/default/files/who_are_the_little_giants_chinese_tech_sme_program_in_the_spotlight_again.pdf (accessed on 2 June 2023).

2664 Goodrich, J. (Vice President, Global Policy, Semiconductor Industry Association) (2016, April 26). *China's 13th Five-Year Plan -- Opportunities & challenges for the US semiconductor industry*, p. 6, available at: https://www.uscc.gov/sites/default/files/Jimmy%20Goodrich_Written%20Testimony%20042716.pdf (accessed on 2 June 2023).

2665 MOF. (2011). *Provisional Measures for Administration of Venture Capital Funds Participating in VC Programs in Emerging Industries*, Art. 2, para. 2, available at: http://www.gov.cn/zwgk/2011-09/09/content_1944275.htm (accessed on 2 June 2023).

2666 *Ibid.*

2667 *Ibid.*, Art. 8.

2668 MOF. (2015). *Provisional Measures for Administration of Government Investment Funds*, Art. 2, available at: http://www.gov.cn/gongbao/content/2016/content_5051233.htm (accessed on 2 June 2023); NDRC. (2017). *Interim Measures for Administration of Government-Funded Industrial Investment Funds*, Art. 2, available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202006/P020200616534029012811.pdf (accessed on 2 June 2023).

Although government guidance funds are required to be directed by market forces and can be driven by market considerations, they are simultaneously expected to reflect and carry out efforts of the Government to achieve national industrial policy goals. As an example, regulations governing government funds provide that such funds should operate independently–generally without government involvement in daily management[2669]–in accordance with a market-oriented approach and should be responsible for their own profits and losses[2670]. Nonetheless, such regulations also note that the funds should be guided by the Government to ensure that the policy objectives of the investment fund are achieved[2671]. Applicable regulations also require that the general direction of the investment fund be in line with industrial policies, investment policies and other national macro-management policies of the Government[2672].

In practice, government-backed funds act in coordination with the Government to achieve broader national policy goals. Government and SOE investment in the semiconductor sector sends a signal to private investors, including retail investors, about the priorities of the Government and future prospects and profits in the industry, which helps to direct private

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2669 MOF. (2011). *Provisional Measures for Administration of Venture Capital Funds Participating in VC Programs in Emerging Industries*, Art. 3, para. 2, available at: http://www.gov.cn/zwgk/2011-09/09/content_1944275.htm (accessed on 2 June 2023); Ministry of Finance. (2015). *Guiding Opinions on the Investment of Fiscal Funds into Government Investment Funds to Support Industrial Development*, Arts. 1.2, 3, available at: http://mof.hainan.gov.cn/attachment/cmsfile/sczt/cytz/201607/daofile/1277W020160713551976144639.pdf (accessed on 2 June 2023).

2670 MOF. (2011). *Provisional Measures for Administration of Venture Capital Funds Participating in VC Programs in Emerging Industries*, Art. 3, para. 1, available at: http://www.gov.cn/zwgk/2011-09/09/content_1944275.htm (accessed on 2 June 2023); Ministry of Finance. (2015). *Guiding Opinions on the Investment of Fiscal Funds into Government Investment Funds to Support Industrial Development*, Arts. 1.2, 1.3, 3, available at: http://mof.hainan.gov.cn/attachment/cmsfile/sczt/cytz/201607/daofile/1277W020160713551976144639.pdf (accessed on 2 June 2023).

2671 MOF and NDRC. (2011). Notice of Issuing the Emerging Industry Venture Capital Plan of the Interim Measures for the Management of Equity Participating Venture Capital Funds, available at: http://www.gov.cn/zwgk/2011-09/09/content_1944275.htm (accessed on 2 June 2023); Ministry of Finance. (2015). Guiding Opinions on the Investment of Fiscal Funds into Government Investment Funds to Support Industrial Development, available at: http://mof.hainan.gov.cn/attachment/cmsfile/sczt/cytz/201607/daofile/1277W020160713551976144639.pdf (accessed on 2 June 2023); NDRC. (2016). Interim Measures for Administration of Government-Funded Industrial Investment Funds, Art. 13, available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202006/P020200616534029012811.pdf (accessed on 2 June 2023).

2672 MOF and NDRC. (2011). Notice of Issuing the Emerging Industry Venture Capital Plan of the Interim Measures for the Management of Equity Participating Venture Capital Funds, available at: http://www.gov.cn/zwgk/2011-09/09/content_1944275.htm (accessed on 2 June 2023); Ministry of Finance. (2015). Guiding Opinions on the Investment of Fiscal Funds into Government Investment Funds to Support Industrial Development, available at: http://mof.hainan.gov.cn/attachment/cmsfile/sczt/cytz/201607/daofile/1277W020160713551976144639.pdf (accessed on 2 June 2023); NDRC. (2016). Interim Measures for Administration of Government-Funded Industrial Investment Funds, Art. 13, available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202006/P020200616534029012811.pdf (accessed on 2 June 2023).

investment into Chinese semiconductor enterprises accordingly, including in equities traded on Shanghai's STAR Market[2673].

19.4.1.1. THE BIG FUND

As described above in Section 19.2.1.1, the Big Fund was established in October 2014 under the guidance of the National IC Industry Development Leading Small Group after the release of the 2014 Guidelines[2674]. Set up to support the IC industry, the Big Fund is overseen by the MIIT and the MOF[2675].

The purpose of setting up the Big Fund, as stated in the 2014 Guidelines, is to "*attract large enterprises, financial institutions and social funds; focus on supporting the development of integrated circuits and other industries; and promote industrial transformation and upgrading*"[2676]. The 2014 Guidelines also state that the Fund should "implement market-oriented operations; focus on supporting integrated circuit manufacturing; take into account design, packaging and testing and equipment and materials; promote enterprises to improve production capacity levels; implement mergers and acquisitions; standardise corporate governance; and form a benign self-development capability"[2677]. As described by the National Manufacturing Strategy Advisory Committee in National Integrated Circuit Industry Investment Fund: Implement National Strategy by Market-Driven Approach, the operation of the Big Fund is supposed to be guided by market forces[2678]. However, as Xu Tao, chief analyst of the Electronics Group of state-owned CITIC Securities[2679], noted, "[t]*he Big Fund's purpose is to support domestic IC projects, and its essence lies in supporting the industry rather than focusing entirely on investment returns* [...]. *National strategic arrangements, investment time*

2673 See, e.g., Reuters. (2022, December 13). *Exclusive: China readying $143 billion package for its chip firms in face of US curbs*, available at: https://www.reuters.com/technology/china-plans-over-143-bln-push-boost-domestic-chips-compete-with-us-sources-2022-12-13/ (accessed on 2 June 2023) (noting that, upon the announcement of a potential new USD 143 billion support package for the semiconductor sector, stocks of Chinese chipmakers jumped).

2674 VerWey, J. (2019). *Chinese semiconductor industrial policy: past and present.* United States International Trade Commission Journal of International Commerce and Economics, available at: https://www.usitc.gov/publications/332/journals/chinese_semiconductor_industrial_policy_past_and_present_jice_july_2019.pdf (accessed on 2 June 2023). ('*USITC Report 2019*').

2675 Xinhua News. (2014, October 14). *National Integrated Circuit Industry Investment Fund is formally founded*, available at: http://www.gov.cn/xinwen/2014-10/14/content_2764849.htm (accessed on 2 June 2023).

2676 State Council. (2014). *Guidelines to Promote National Integrated Circuit Industry Development*. § 4.2, p. 3, available at: http://www.csemi.com/uploads/soft/190223/chanyeguihua/3.pdf (accessed on 2 June 2023).

2677 *Ibid*.

2678 National Manufacturing Strategy Advisory Committee. (2017). *National Integrated Circuit Industry Investment Fund: Implement National Strategy by Market-Driven Approach*, available at: http://www.cm2025.org/uploadfile/2017/1219/20171219094926627.pdf (accessed on 2 June 2023).

2679 The largest shareholder of CITIC Securities is CITIC Corp. Ltd. (中国中信有限公司), a wholly-owned subsidiary of CITIC Ltd. (中国中信股份有限公司), which was established under the instructions of the State Council and remains under its ultimate control. See: CITIC Ltd. (2021). *2020 annual report of CITIC Limited*, available at: https://www1.hkexnews.hk/listedco/listconews/sehk/2021/0421/2021042100516.pdf (accessed on 2 June 2023);.

sequence, market response, etc. will generally be considered when determining the recovery period"[2680].

Capital for the Big Fund has been raised from both public and private entities[2681]. The original founders of the Big Fund include the MOF, CDB Capital Co. Ltd., China Tobacco Corp., Beijing E-town International Investment Development Ltd., China Mobile Group, Shanghai Guosheng (Group) Ltd., China Electronics Technology Group (*'CETC'*), Beijing Unigroup Communications Technology Group and SINO-IC Capital Co., Ltd.[2682]. These nine founders were later joined by another seven entities, including Wuhan Financial Holding, China Telecom, China Unicom, China Electronics, Datang Telecom, Summitview Capital and Cybernaut Investment Group[2683].

The Big Fund is owned by the National Integrated Circuit Industry Investment Fund Co. Ltd.[2684] and operates as a general corporation making equity investments in enterprises to support companies' international competitiveness [2685]. The investment strategy of the Big Fund is to focus on investing money in large *'backbone'* enterprises within each segment of the industrial chain (that is, design, fabrication and ATP)[2686]. As a practical matter, this generally translates into investments in the top companies in each segment[2687].

The Big Fund is able to invest using various tools available in the primary and secondary markets, including private equity, fund investment and mezzanine investments (i.e., investments structured in a company's capital structure between senior debt and common

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2680 East Money. (2019, December 24). *National IC Fund invests in Shanghai Precision Measurement Semiconductor Technology, Inc*, available at: http://fund.eastmoney.com/a/201912241334415016.html (accessed on 2 June 2023).

2681 MOF. (2015). *Smooth Operation of National Integrated Circuit Industry Investment Fund*, available at: http://www.gov.cn/xinwen/2015-09/11/content_2929586.htm (accessed on 5 June 2023).

2682 Sino IC Leasing Co., Ltd. (2021). *Prospectus of Sino IC Leasing Co., Ltd. on first series of super short-term commercial paper in 2021*, p. 43, available at: http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/BOND/2021/2021-6/2021-06-11/15967345.PDF (accessed on 5 June 2023).

2683 SINA Finance. (2019, March 13). *GF Securities: Analysis of phase I investment of the National Integrated Circuit Industry Investment Fund*, available at: https://finance.sina.com.cn/stock/hyyj/2019-03-13/doc-ihsxncvh2157328.shtml (accessed on 5 June 2023).

2684 Shanghai Guosheng. (2021). Prospectus of corporate bonds (2nd Instalment) of Shanghai Guosheng Group Co., Ltd. publicly issued to professional investors in 2021, p. 75, available at: http://www.sse.com.cn/disclosure/bond/announcement/company/c/2021-09-23/42979537394401263292509 11.pdf (accessed on 5 June 2023).

2685 China Electronics News Agency. (2014, December 30). *First overseas M&A transaction by the Big Fund*, available at: http://www.cena.com.cn/industrynews/20141230/60643.html (accessed on 5 June 2023); see also National Manufacturing Strategy Advisory Committee. (2017). *National Integrated Circuit Industry Investment Fund: Implement National Strategy by Market-Driven Approach*, available at: http://www.cm2025.org/uploadfile/2017/1219/20171219094926627.pdf (accessed on 5 June2023).

2686 Semi Insights. (2021). *Review of investment results of phase I of the Big Fund*, available at: http://www.semiinsights.com/s/electronic_components/23/41742.shtml (accessed on 5 June 2023).

2687 According to Mr. Wang Zhanfu, former chairman of the Big Fund, the Big Fund's investments in the top three companies in each segment of the industry account for more than 70% of the total investments made by it in each segment. See People's Posts and Telecommunications News. (2017, December 21). *Big Fund Chairman Wang Zhanfu: Increase the competitiveness of the whole IC industry chain*, available at: http://www.eepw.com.cn/article/201712/373324.htm (accessed on 5 June 2023).

equity)[2688]. SINO-IC Capital Co., Ltd., is the sole fund manager of the Big Fund, and China Development Bank, China's primary policy bank, is the custodian bank[2689]. The Fund is also able to withdraw its investments through buy-backs, equity transfers and IPOs[2690].

19.4.1.1.1. Scale of Investment

The Big Fund is large in scale. Out of the eleven Chinese government-backed funds the US Chamber of Commerce has identified as targeting MIC 2025 industries, the Big Fund is the second largest, behind the more general Special Constructive Fund[2691].

The Big Fund has so far undergone two phases of investment. Founded in 2014, Phase I of the Big Fund had registered capital of more than RMB 98 billion (~EUR 12,5 billion)[2692] and ultimately raised a total of RMB 138,72 billion (~EUR 19,6 billion), exceeding the target of RMB 120 billion (~EUR 17 billion)[2693]. Phase I invested in 23 companies publicly and 29 companies privately, with a total of about 70 effective investment projects[2694]. IC manufacturing (fabrication) was the major focus of Phase I[2695]. About 67% of total investment in Phase I went to semiconductor manufacturing firms, 17% went to chip design firms, 10% went to ATP firms, and 6% went to equipment and materials firms[2696]. The Big Fund also drove investment from non-government capital. Phase I of the Big Fund further raised approximately RMB 514,5 billion (~EUR 67,5 billion) of private capital (including equity financing; corporate bonds; and banks, trusts and other financial institution loans), achieving a follow-up investment ratio as high as 1:5[2697].

2688 GF Securities. (2019). *Analysis of investments of phase I of the National Integrated Circuit Industry Fund*, p. 6, available at: http://pg.jrj.com.cn/acc/Res/CN_RES/INDUS/2019/3/8/b61dee56-0988-4daf-8a30-bdac1a229c35.pdf (accessed on 5 June 2023).

2689 Shanghai Guosheng. (2021). Prospectus of corporate bonds (2nd Instalment) of Shanghai Guosheng Group Co., Ltd. publicly issued to professional investors in 2021, pp. 74–75, available at: http://www.sse.com.cn/disclosure/bond/announcement/company/c/2021-09-23/4297953739440126329250911.pdf (accessed on 5 June 2023).

2690 *Ibid.*, pp. 76–77.

2691 US Chamber of Commerce. (2017). *Made in China 2025*, pp. 63–64, available at: https://www.uschamber.com/assets/documents/final_made_in_china_2025_report_full.pdf (accessed on 5 June 2023).

2692 Lihua, W. (2018, May 3). *Phase II of the Big Fund is raising funds*. Economic Information Daily, available at: http://www.jjckb.cn/2018-05/03/c_137152424.htm (accessed on 5 June 2023).

2693 Caijing Magazine. (2022, July 31). *Investigation into Ding Wenwu, General Manager of the Big Fund*, available at: http://m.caijing.com.cn/article/268397?target=blank (accessed on 5 June 2023).

2694 CSET Report 2021, p. 19.

2695 Shanghai Guosheng. (2021). Prospectus of corporate bonds (2nd Instalment) of Shanghai Guosheng Group Co., Ltd. publicly issued to professional investors in 2021, p. 75, available at: http://www.sse.com.cn/disclosure/bond/announcement/company/c/2021-09-23/4297953739440126329250911.pdf (accessed on 5 June 2023).

2696 GF Securities. (2019). *Analysis of investments of phase I of the National Integrated Circuit Industry Fund*, p. 1, available at: http://pg.jrj.com.cn/acc/Res/CN_RES/INDUS/2019/3/8/b61dee56-0988-4daf-8a30-bdac1a229c35.pdf (accessed on 5 June 2023).

2697 Leading Industry Research. (2021). The development and investment distribution of the Big Fund and the statistics of the first and second phases of foreign investment projects, available at: http://www.leadingir.com/trend/view/5840.html (accessed on 5 June 2023).

Phase II of the Big Fund was established in October 2019 with registered capital of RMB 204 billion (~EUR 26,8 billion)[2698]. Phase II, which is scheduled to conclude in 2024, has 27 shareholders, with the top five shareholders including the Ministry of Finance (11,02%), China Development Bank Capital (10,78%), Optics Valley Financial Holding Group (7,35%), Chongqing Strategic Emerging Industry Equity Investment Fund Partnership (7,35%) and China Tobacco (7,35%)[2699]. The new investment focus during Phase II leans toward IC design and key building blocks of the sector, such as advanced semiconductor manufacturing equipment and materials[2700]. As of 6 April 2022, Phase II had invested in at least thirty-nine projects, covering publicly listed companies, subsidiaries of listed companies and private companies[2701], including Hefei Peyton Storage[2702], Unisoc[2703], SMIC[2704], SMIC's Beijing subsidiary[2705], SMIC's Southern subsidiary[2706] and Hangzhou Changchuan Smart Manufacturing (whose businesses include semiconductor manufacturing equipment)[2707]. Phase II of the Big Fund is still underway as of writing of this Report, such that the full impact of this phase has yet to be determined. However, reporting from the second half of 2022 suggests that investment activity associated with Phase II has slowed as a result of audits of the Big Fund and companies in which it has invested[2708].

2698 Shanghai Guosheng. (2021). Prospectus of corporate bonds (2nd Instalment) of Shanghai Guosheng Group Co., Ltd. publicly issued to professional investors in 2021, p. 49, available at: http://www.sse.com.cn/disclosure/bond/announcement/company/c/2021-09-23/429795373944012632925091 1.pdf (accessed on 5 June 2023).

2699 *Ibid.*, pp. 86–87.

2700 Economic Information Daily. (2018, May 3). *Phase II of the Big Fund is raising funds and focuses on the IC industry chain*, available at: http://www.jjckb.cn/2018-05/03/c_137152424.htm (accessed on 5 June 2023).

2701 Chip Thought. (2022, April 3). *Investment map of Big Fund phase II*. Semi Insights, available at: http://www.semiinsights.com/s/electronic_components/23/45216.shtml (accessed on 5 June 2023); see also Shanghai Stock Exchange. (2022). *Announcement of Beijing E-Town international investment and development Co., Ltd. on progress concerning loss of actual control over Beijing Jidian Holding Co., Ltd*, available at: http://www.sse.com.cn/disclosure/bond/announcement/company/c/new/2022-04-06/188683_20220406_1_Mw2bRw4c.pdf (accessed on 5 June 2023).

2702 Shenzhen Great Wall Development Technology Co., Ltd. (2021). *Announcement on increase of capital of Shenzhen Payton and Hefei Payton Storage*, p. 2, available at: http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021/2021-6/2021-06-04/7301966.PDF (accessed on June 2023).

2703 Jieman News. (2020, May 11). *UNISOC became the first project invested by phase II of the Big Fund*, available at: https://www.jiemian.com/article/4358936.html (accessed on 5 June 2023).

2704 Shanghai Stock Exchange. (2020). *Announcement of SMIC concerning IPO and public listing on STAR market*, p. 28, available at: http://static.sse.com.cn/disclosure/listedinfo/bulletin/star/c/688981_20200706_2.pdf (accessed on 5 June 2023).

2705 Shanghai Stock Exchange. (2021). *2020 annual report of SMIC*, p. 33, available at: http://static.sse.com.cn/disclosure/listedinfo/announcement/c/new/2021-04-01/688981_20210401_4.pdf (accessed on 8 June 2023).

2706 *Ibid.*

2707 CNINFO. (2020, December 19). *Board resolution of the 21st board meeting of Changchuan technology*, available at: http://www.cninfo.com.cn/new/disclosure/detail?orgId=9900031824&announcementId=1208941177&announcementTime=2020-12-19 (accessed on 5 June 2023).

2708 See Financial Times. (2022, September 28). *China's Big Fund corruption probe casts shadow over chip sector*, available at: https://www.ft.com/content/8358e81b-f4e7-4bad-bc08-19a77035e1b4 (accessed on 22 December 2022).

19.4.1.1.2. Investment Cycle

For each investment phase, the Big Fund set up an investment period of five years and a recovery period of five years[2709]. In addition, the duration of the Fund may be extended for an additional five years, if necessary, subject to the approval of the General Meeting of Shareholders[2710]. While some projects may have investment payback periods that are shorter than the maximum five-year period, heavy asset projects such as those in manufacturing, packaging and testing and equipment usually have a longer investment payback period[2711].

In 2019, Phase I of the Big Fund entered the investment recovery period, during which the Fund began to withdraw from investment projects[2712]. In June 2021, the RMB 138.7 billion (~EUR 18,1 billion) investment cost of the Big Fund had recovered approximately RMB 15 billion (~EUR 1,97 billion)[2713], and as of 16 June 2021, the floating profit of the shares held by the Big Fund has reportedly exceeded RMB 64 billion (~EUR 8,40 billion)[2714].

19.4.1.2. Subnational IC Investment Guidance Funds

The 2014 Guidelines also supports "*the establishment of local integrated circuit industry investment funds* [and] *encourage[*d] *all kinds of private capital and equity investment funds to enter the field of integrated circuits*"[2715]. In addition to the national Big Fund, sub-national governments have also established various local semiconductor funds, which are organised, managed and run in similar ways. Specifically:

Beijing announced the establishment of a local semiconductor fund – the Beijing Integrated Circuit Industry Development Fund – in December 2013, with a total registered capital of RMB 30 billion (~EUR 3,67 billion)[2716]. This fund has invested in the acquisition of Silex, a Swedish MEMS foundry, and in Epitop Optoelectronic Co. Ltd., a Chinese company specialising in LED epitaxial wafers and chips[2717].

2709 Shanghai Guosheng. (2021). Prospectus of corporate bonds (2nd Instalment) of Shanghai Guosheng Group Co., Ltd. publicly issued to professional investors in 2021, p. 76, available at: http://www.sse.com.cn/disclosure/bond/announcement/company/c/2021-09-23/42979537394401263292509 11.pdf (accessed on 5 June 2023).

2710 This was explicitly mentioned as to Phase II of the Big Fund. *Ibid.*, p. 89.

2711 East Money. (2019, December 24). *National IC Fund invests in Shanghai precision measurement semiconductor technology, Inc*, available at: http://fund.eastmoney.com/a/201912241334415016.html (accessed on 5 June 2023).

2712 Economic Observer. (2022, August 4). *Anti-corruption in semiconductor, shock for the Big Fund*, available at: http://m.eeo.com.cn/2022/0804/546830.shtml (accessed on 5 June 2023).

2713 Yicai. (2022, January 23). *Low loss and high return on semiconductor investment, how does the Big Fund consider the financial returns?*, available at: https://www.yicai.com/news/101298712.html (accessed on 5 June 2023).

2714 Sina Finance. (2021, June 17). *High returns on the investments made by phase I of the Big Fund*, available at: http://finance.sina.com.cn/money/fund/jjyj/2021-06-17/doc-ikqcfnca1620497.shtml (accessed on 5 June 2023); see also Leading Industry Research. (2022). *The Big Fund is an Important Tool for the IC Industry Development, Phase II Focuses on Semiconductor Equipment, Materials and Other Upstream Sectors*, available at: http://www.leadingir.com/hotspot/view/3390.html (accessed on 5 June 2023).

2715 State Council. (2014). *Guidelines to Promote National Integrated Circuit Industry Development*, § 4.2, p. 3, available at: http://www.csemi.com/uploads/soft/190223/chanyeguihua/3.pdf (accessed on 5 June 2023).

2716 Chip Manufacturing. (2018, May 15). *Summary of IC Industry Investment Funds in China*, available at: http://www.chipmanufacturing.org/h-nd-260.html (accessed on 5 June 2023).

2717 *Ibid.*

Shanghai established its semiconductor fund – the Shanghai Integrated Circuit Industry Investment Fund – in 2016, with a total registered capital of RMB 50 billion (~EUR 6,8 billion). Shanghai allocated RMB 10 billion of the total capital for equipment and materials, RMB 10 billion for IC design-related M&A deals and RMB 30 billion for IC manufacturing (~EUR 1,36 billion for equipment and materials, ~EUR 1,36 billion for IC design-related M&A deals and ~EUR 4,08 billion for IC manufacturing). In its second phase, it invested in an IC wafer foundry project with HLMC, a subsidiary of Huahong Group[2718].

Hubei announced the establishment of its semiconductor fund – Hubei Integrated Circuit Industry Investment Fund – in 2015 with a total registered capital of RMB 30 billion (~EUR 4,31 billion); it has invested in the second phase of the Wuhan Xinxin Project, which is run by Wuhan Xinxin Semiconductor Manufacturing Co., Ltd., a subsidiary of SMIC[2719].

Shenzhen established a semiconductor fund with a total registered capital of RMB 20 billion (~EUR 2,87 billion) in 2015, which has invested in Sanechips Technology Co. Ltd., a leading communication IC design company in China[2720].

Nanjing established a local fund in 2016 with a total of RMB 60 billion (~EUR 8,16 billion)[2721].

Guangdong set up its local fund in 2016 with a total of around RMB 15 billion (~EUR 2,04 billion) invested[2722].

19.4.2. TAX RELIEF

The Government often provides tax incentives as a means to promote the domestic semiconductor industry[2723]. As another mechanism for reducing dependence on foreign chips and technologies and encouraging domestic production, China introduced a series of tax breaks and exemptions for the domestic semiconductor industry beginning in 2000[2724]. Generally, IC enterprises enjoy several common tax and tariff benefits, including:

- an exemption or reduction in the EIT rate for a certain period of time[2725];

2718 *Ibid.*

2719 *Ibid.*, see also XMC. *About us*, available at: https://www.xmcwh.com/en/site/company (accessed on 5 June 2023).

2720 Chip Manufacturing. (2018, May 15). *Summary of IC Industry Investment Funds in China*, available at: http://www.chipmanufacturing.org/h-nd-260.html (accessed on 5 June 2023).

2721 *Ibid.*

2722 *Ibid.*

2723 State Council. (2000). *Several Policies on Encouraging the Development of Software Industry and IC Industry*, Recital, available at: http://www.gov.cn/gongbao/content/2000/content_60310.htm (accessed on 5 June 2023); State Council. (2020). *Several Policies for Promoting High Quality Development of IC Industry and Software Industry in the New Era*, Recital, available at: http://www.gov.cn/zhengce/content/2020-08/04/content_5532370.htm (accessed on 5 June 2023).

2724 State Council. (2000). *Several Policies on Encouraging the Development of Software Industry and IC Industry*, Recital, Art. 40, available at: http://www.gov.cn/gongbao/content/2000/content_60310.htm (accessed on 5 June 2023); Deloitte. (2020). *Fiscal and Tax Measures to Promote High Quality Development of IC and Software Industries*, p. 1, available at: https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/tax/tax-newsflash/deloitte-cn-tax-taxnewsflash-bilingual-201231.pdf (accessed on 5 June 2023).

2725 State Council. (2020). *Several Policies for Promoting High Quality Development of IC Industry and Software Industry in the New Era*, Art. 1, available at: http://www.gov.cn/zhengce/content/2020-08/04/content_5532370.htm (accessed on 5 June 2023).

- exemption from tariffs for imports of key equipment and materials[2726];
- deduction of up to 100% of R&D expenses from taxable income when calculating EIT[2727]; and
- accelerated or shortened depreciation of fixed assets, which gives rise to additional tax benefits[2728].

19.4.2.1. ENTERPRISE INCOME TAX

China provides qualifying IC enterprises with reductions in the rate of EIT[2729]. For certain periods of time after qualifying enterprises become profitable, such reductions and discounts may be as much as 12,5 or 15% points, or may even include a complete exemption from EIT[2730]. Thus, rather than pay the 25% EIT rate that normally applies to resident enterprises in China[2731], qualifying IC enterprises could benefit from reduced EIT rates of 0%, 10% or 12,5%[2732].

The State Council has issued several notices promoting the development of the IC and software industries using preferential tax mechanisms. In particular, three State Council notices – namely the 2000 Circular, 2011 Circular and 2020 Circular mentioned above in Section 19.3.3 – included provisions on preferential EIT treatment for IC enterprises. Following the issuance of each of these circulars, central government agencies issued implementing regulations to clarify issues related to EIT reduction, including eligibility criteria[2733].

2726 *Ibid.*, Arts. 1.6, 1.7, 1.8.

2727 NDRC. (2022). Notice on Relevant Requirements for Preparation of List of IC Companies or Projects and Software Companies Eligible for Preferential Tax Treatment in 2022, Annex 1, available at: http://www.gov.cn/zhengce/zhengceku/2022-03/16/content_5679297.htm (accessed on 5 June 2023); Ministry of Finance. (2015). Notice on Improving Policies for Pre-Tax Deduction of R&D Expense, available at:. http://www.chinatax.gov.cn/n810341/n810755/c1878881/content.html (accessed on 5 June 2023); Ministry of Finance. (2022). Announcement on Further Increasing the Pre-Tax Deduction Ratio Concerning R&D Expenses of Small and Medium Technology Companies, available at: http://sh.mof.gov.cn/tongzhitonggao/202206/t20220608_3816533.htm (accessed on 5 June 2023); Ministry of Finance. (2021). Announcement on Further Improving Policies for Pre-Tax Deduction of R&D Expenses, Art. 1, available at: http://www.gov.cn/zhengce/zhengceku/2021-04/07/content_5598193.htm (accessed on 5 June 2023).

2728 MOF and State Taxation Administration. (2012). *Notice on EIT Policies for Further Encouraging Development of Software Industry and IC Industry*, Art. 8, available at: http://www.chinatax.gov.cn/n810341/n810765/n812151/n812421/c1083639/content.html (accessed on 5 June 2023).

2729 Deloitte. (2020). Fiscal and Tax Measures to Promote High Quality Development of IC and Software Industries, p. 1, available at: https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/tax/tax-newsflash/deloitte-cn-tax-taxnewsflash-bilingual-201231.pdf (accessed on 5 June 2023).

2730 *Ibid.*, p. 1, 3.

2731 *Ibid.*, p. 3.

2732 MOF and State Taxation Administration. (2012). *Notice on EIT Policies for Further Encouraging Development of Software Industry and IC Industry*, Arts. 1, 4, available at: http://www.chinatax.gov.cn/n810341/n810765/n812151/n812421/c1083639/content.html (accessed on 5 June 2023).

2733 See, e.g., MOF. (2012). Circular Caishui [2012] No. 27 on Enterprise Income Tax Policies for Further Encouraging the Development of Software and Integrated Circuit Industries, available at: http://www.gov.cn/zwgk/2012-05/03/content_2128844.htm (accessed on 5 June 2023). See also Ministry of Finance. (2020). *Announcement on the Enterprise Income Tax Policies for Promoting the High Quality Development of the Integrated Circuit Industry and the Software Industry*, available at: http://www.gov.cn/zhengce/zhengceku/2020-12/17/content_5570401.htm (accessed on 5 June 2023).

IC enterprises and projects entitled to preferential EIT treatment under multiple preferential taxation programs may choose which they wish to apply[2734]. These EIT benefits are briefly described in the following sections.

19.4.2.1.1. Key IC Design Enterprises[2735]

- Beginning in the first profitable year of the eligible enterprise or project:
  - EIT will be exempted from the first year to the fifth year[2736]; and
  - EIT will be levied at a discounted rate of 10% after the fifth year[2737].

In order to be eligible for this treatment, an enterprise must, among other things, be a Chinese entity focused on integrated circuit design, electronic design automation tool development or intellectual property core design; have at least twenty employees who meet certain qualifications; have an annual IC design sales income that accounts for no less than 70% of total income and spend no less than 6% of total annual sales income on R&D[2738].

19.4.2.1.2. IC Manufacturing Enterprises or Projects (Established Before 31 December 2017, and Profitable Before 31 December 2019)[2739]

Beginning in the first profitable year, IC manufacturers or projects that manufacture ICs with a line width of up to 0.8 micrometres shall be exempt from EIT in the first and second years and be subject to EIT at half of the statutory rate of 25% in the third to fifth years[2740].

In addition, IC manufacturers or projects that have a business duration/term of greater than 15 years, and that manufacture ICs with a line width of up to 0.25 micrometres, or with an investment amount of over RMB 8 billion (~EUR 1,02 billion), shall be exempt from EIT in

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2734 MOF. (2020). Announcement on the Enterprise Income Tax Policies for Promoting the High Quality Development of the Integrated Circuit Industry and the Software Industry, Art. 6, available at: http://www.gov.cn/zhengce/zhengceku/2020-12/17/content_5570401.htm (accessed on 5 June 2023).

2735 State Council. (2020). Notice of the State Council on Issuing the Several Policies to Promote the High Quality Development of the Integrated Circuits Industry and Software Industry in the New Era, Art. 1.3, available at: http://www.gov.cn/zhengce/content/2020-08/04/content_5532370.htm (accessed on 5 June 2023).

2736 *Ibid.*

2737 *Ibid.*

2738 NDRC. (2022). Notice on Relevant Requirements for Formulating the 2022 List of Integrated Circuit Enterprises or Projects and Software Enterprises Subject to Preferential Tax Policies, available at: http://www.gov.cn/zhengce/zhengceku/2022-03/16/content_5679297.htm (accessed on 5 June 2023); NDRC. (2022). *Annex 1: Criteria of Enterprise and Standards of Projects for Being subject to the Preferential Tax Policies,* Art. 2, available at http://www.gov.cn/zhengce/zhengceku/2022-03/16/5679297/files/db820797b1424334862630b188069aae.PDF (accessed on 5 June 2023).

2739 State Taxation Administration. (2022). *Summary of Guidelines for Preferential Taxation Policies for Software Enterprises and IC Enterprises*, pp. 20, 22–23, available at http://www.chinatax.gov.cn/chinatax/n810341/n810825/c101434/c5175486/5175486/files/%E8%BD%AF%E4%BB%B6%E4%BC%81%E4%B8%9A%E5%92%8C%E9%9B%86%E6%88%90%E7%94%B5%E8%B7%AF%E4%BC%81%E4%B8%9A%E7%A8%8E%E8%B4%B9%E4%BC%98%E6%83%A0%E6%94%BF%E7%AD%96%E6%8C%87%E5%BC%95%E6%B1%87%E7%BC%96.pdf (accessed on 5 June 2023).

2740 MOF. (2018). *Notice on Issues Concerning EIT Policies for IC Manufacturing Enterprises*, Art. 6, available at: http://www.chinatax.gov.cn/n810341/n810755/c3372721/content.html (accessed on 5 June 2023).

the first to fifth years and shall be subject to EIT at half of the statutory rate of 25% in the sixth to tenth years[2741].

19.4.2.1.3. IC Manufacturing Enterprises or Projects (Newly Established and Invested in after 1 January 2018, Which Became Profitable Before 31 December 2019, and Whose Business Duration/Term Is More than 15 Years)[2742]

Beginning in the first profitable year, IC manufacturing enterprises or projects with an investment of more than RMB 15 billion (~EUR 1,92 billion) will be exempt from EIT from the first to fifth years and will be subject to EIT levied at half of the 25% statutory tax rate from the sixth to the tenth years[2743].

19.4.2.1.4. IC Manufacturing Enterprises or Projects (since 1 January 2020)[2744]

- Beginning in the first profitable year:
  - IC enterprises or projects that manufacture ICs with line width 28 nanometres or less and that have been operating for more than 15 years will be exempt from EIT from the first to the tenth years[2745];
  - IC enterprises or projects that manufacture ICs with line width between 65 and 28 nanometres and that have been operating for more than 15 years will be exempt from EIT from the first to the fifth years, and will be subject to EIT levied at half of the 25% statutory tax rate from the sixth to the tenth years[2746]; and
  - IC enterprises or projects that manufacture ICs with line width between 130 and 65 nanometres and that have been operating for more than 10 years will be exempt from EIT for the first to the second year and will be subject to EIT levied at half of the 25% statutory tax rate from the third to the fifth years[2747].

2741 *Ibid.*, Art. 5.

2742 State Taxation Administration. (2022). *Summary of Guidelines for Preferential Taxation Policies for Software Enterprises and IC Enterprises*. pp. 27–28, available at: http://www.chinatax.gov.cn/chinatax/n810341/n810825/c101434/c5175486/5175486/files/%E8%BD%AF%E4%BB%B6%E4%BC%81%E4%B8%9A%E5%92%8C%E9%9B%86%E6%88%90%E7%94%B5%E8%B7%AF%E4%BC%81%E4%B8%9A%E7%A8%8E%E8%B4%B9%E4%BC%98%E6%83%A0%E6%94%BF%E7%AD%96%E6%8C%87%E5%BC%95%E6%B1%87%E7%BC%96.pdf (accessed on 5 June 2023).

2743 MOF. (2018). *Notice on Issues Concerning EIT Policies for IC Manufacturing Enterprises*, Art. 2, available at: http://www.chinatax.gov.cn/n810341/n810755/c3372721/content.html (accessed on 5 June 2023).

2744 State Taxation Administration. (2022). *Summary of Guidelines for Preferential Taxation Policies for Software Enterprises and IC Enterprises*, p. 30, available at: http://www.chinatax.gov.cn/chinatax/n810341/n810825/c101434/c5175486/5175486/files/%E8%BD%AF%E4%BB%B6%E4%BC%81%E4%B8%9A%E5%92%8C%E9%9B%86%E6%88%90%E7%94%B5%E8%B7%AF%E4%BC%81%E4%B8%9A%E7%A8%8E%E8%B4%B9%E4%BC%98%E6%83%A0%E6%94%BF%E7%AD%96%E6%8C%87%E5%BC%95%E6%B1%87%E7%BC%96.pdf (accessed on 5 June 2023).

2745 MOF. (2020). *Announcement on EIT Policies for Promoting High Quality Development of IC Industry and Software Industry*, Art. 1 , available at:. http://www.gov.cn/zhengce/zhengceku/2020-12/17/content_5570401.htm (accessed on 5 June 2023).

2746 *Ibid.*

2747 *Ibid.*

19.4.2.1.5. IC Design, Equipment, Materials, Packaging and Testing Enterprises[2748]

Beginning in the first profitable year:

- EIT will be exempted for the first and second years[2749]; and
- EIT will be levied at half of the 25% statutory tax rate from the third to the fifth year[2750].

19.4.2.1.6. Preferential EIT Rates for Qualifying High- and New-Tech Enterprises

IC companies that do not qualify for the IC industry-targeted preferential EIT rates described above may nevertheless benefit from preferential EIT tax policies that target companies in a broader range of high-tech industries through the HNTE Program. China has been providing a preferential EIT rate of 15% to HNTEs since 1991, but this preferential treatment was not uniformly provided by legislation until the promulgation of the *Law of the People's Republic of China on Enterprise Income Tax* in 2008[2751].

According to Article 2 of the *Administrative Measures on the Accreditation of High- and New-Tech Enterprises*, '*high-and new-tech enterprises*' are resident enterprises that (i) engage in continuous R&D and application of technological achievements in the fields prescribed in the list of *High-and -New-Tech Fields with Key Support of the State* and (ii) develop core independent intellectual property rights and conduct their business operations on the basis of these intellectual property rights[2752]. An attachment to the *Administrative Measures*, the *High-Tech Fields with Key Support of the State*, identifies eight fields supported by the state: electronic information, biology and new medicine, aerospace, new materials, high-tech services, new energy and energy saving, resources and environment and advanced manufacturing and automation. While the IC industry is not named as one of the eight fields or their subfields, IC-related technologies are listed as examples of specific technologies under several subfields. The examples under the '*microelectronics*' sub-field are largely related to the IC industry[2753].

19.4.2.2. TRADE-RELATED TAX

Domestic enterprises that import necessary key parts and components or raw materials for manufacturing key IC equipment supported by the Government are exempt from customs

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2748 *Ibid.*, Art. 3.

2749 *Ibid.*

2750 *Ibid.*

2751 State Council. (1991). *Provisions of the Tax Policy for the National High-and-New-Tech Industrial Development Zones,* Art. 4, available at: http://www.elinklaw.com/zsglmobile/lawView.aspx?id=5032 (accessed on 13 June 2023); National People's Congress. (2008). *Law of the People's Republic of China on Enterprise Income Tax,* Art. 28, available at: http://www.gov.cn/flfg/2007-03/19/content_554243.htm (accessed on 6 June 2023).

2752 Ministry of Science and Technology. (2016). *Administrative Measures on the Accreditation of High-and New-Tech Enterprises*, Art. 2, available at: http://www.gov.cn/gongbao/content/2016/content_5076985.htm (accessed on 6 June 2023).

2753 Ministry of Science and Technology. (2016). *High-Tech Fields with Key Support of the State*, available at: https://www.dlhitech.gov.cn/resources/news/newsConstantImages/20210126183848590.pdf (accessed on 6 June 2023).

duties, tariffs and import value-added tax[2754]. To qualify, the IC enterprises must manufacture key equipment or products listed in the *Catalogue of Key Technological Equipment and Products Whose Development Are Supported by the State (2021)*[2755].

For eligible IC enterprises, the Circular of the Ministry of Finance, the General Administration of Customs and the State Administration of Taxation on the Import Tax Policies for Supporting the Development of Integrated Circuit Industry and Software Industry applies an import tax exemption to imported self-use raw materials, consumables, special building materials for clean rooms, supporting systems and spare parts for IC production equipment[2756].

19.4.3. Grants and Subsidies

There are a number of programs that provide grants to enterprises or projects in the IC industry both at the national level and at the local level. At the national level, grant programs include two Major S&T Projects that relate to ICs. These include the "*Core, High and Basic*" Project and the "*Very Large Scale Integrated Circuit Manufacturing Equipment and Complete Set of Processes*" Project[2757]. Additional national grant programs include the Industrial Transformation and Upgrading Funds (Made in China 2025)[2758] and the SEI Special Funds[2759]. Sub-national governments also offer grants through a variety of programs. Some examples of past and present programs include the:

- Jiangsu Provincial Special Fund for Industrial and Information Industry Transformation and Upgrading[2760];

2754 MOF. (2019). *Notice on Adjusting the Catalogue of Import Tax Policies for Major Technical Equipment*, , available at: http://www.chinatax.gov.cn/chinatax/n810341/n810755/c5140651/content.html (accessed on 6 June 2023).

2755 MIIT. (2021). *Notice on Adjusting the Catalogue of Import Tax Policies for Major Technical Equipment*, available at: http://www.gov.cn/zhengce/zhengceku/2021-12/19/content_5661949.htm (accessed on 6 June 2023); MIIT (2021). *Catalogue of Key Technological Equipment and Products Whose Development Are Supported by the State (2021)*, available at; http://www.gov.cn/zhengce/zhengceku/2021-12/19/5661949/files/22b8431835bb4885a921bf76e3a44bfd.pdf (accessed on 6 June 2023).

2756 MOF. (2020). Circular of the Ministry of Finance, the General Administration of Customs and the State Administration of Taxation on the Import Tax Policies for Supporting the Development of Integrated Circuit Industry and Software Industry, available at: http://www.gov.cn/zhengce/zhengceku/2021-03/29/content_5596564.htm (accessed on 6 June 2023). This circular replaced and invalidated the Circular of the Ministry of Finance, the General Administration of Customs and the State Administration of Taxation on the Import Tax Policies for Supporting the Development of Integrated Circuit Industry and Software Industry, which in turn replaced and invalidated the Exemption of Tariffs and Import VAT for Imported Raw Materials and Consumables for Eligible Integrated Circuits Manufacturing Enterprises.

2757 State Council. (2006). *Outline of the National Medium- and Long-Term Science and Technology Development Plan (2006-2020)*, Chap. 4, available at: http://www.gov.cn/gongbao/content/2006/content_240244.htm (accessed on 6 June 2023).

2758 MOF. (2016). *Industrial Transformation and Upgrading Funds (Made in China 2025)*, available at: http://jjs.mof.gov.cn/zxzyzf/gyzxsjzj/201702/t20170214_2534902.htm (accessed on 6 June 2023).

2759 MOF. (2012). *Provisional Measures for Administration of Special Funds for Development of Strategic Emerging Industry*, available at: http://www.gov.cn/gongbao/content/2013/content_2376208.htm (accessed on 8 November 2022).

2760 Jiangsu Provincial Industry and Information Technology Department, Jiangsu Provincial Finance Department. (2020). Notice of Jiangsu Provincial Industry and Information Technology Department and Jiangsu Provincial Finance Department on Issuing the Administration Measures for the Special Fund of the Transformation and Upgrading of Jiangsu's Industrial and Information Industry, available at: http://www.js.gov.cn/art/2020/12/22/art_64797_9611822.html (accessed on 6 June 2023).

- Jiangsu Provincial Special Fund for the Transformation of Science and Technology Achievements[2761];
- Shanghai Special Fund for Industry Transformation and Upgrading Development[2762];
- Shanghai Special Fund for Promoting High Quality Industrial Development (Provisional)[2763];
- Shanghai Special Supporting Fund for Software and IC Industry Development[2764];
- Shanghai Special Supporting Fund for First Round Tape-out of IC Design Enterprise Engineering Products[2765];
- Beijing Special Fund for the Development of High-tech, Precision and Advanced Industries[2766];

2761 Jiangsu Provincial Science and Technology Department, Jiangsu Provincial Finance Department. (2020). Notice of Jiangsu Provincial Science and Technology Department and Jiangsu Provincial Finance Department on Issuing the Administration Measures for the Special Fund for the Transformation of Scientific and Technological Achievement, available at: *http://jsstyj.jiangsu.gov.cn/art/2020/6/5/art_78433_9198419.html*; also Jiangsu Provincial Science and Technology Department, Jiangsu Provincial Finance Department. (2021) 2021 Project Guidelines for Provincial Special Fund for the Transformation of Scientific and Technological Achievements, available at: http://www.jsai.org.cn/uploads/2021/02/%E9%99%84%E4%BB%B61%EF%BC%9A2021%E5%B9%B4%E7%9C%81%E7%A7%91%E6%8A%80%E6%88%90%E6%9E%9C%E8%BD%AC%E5%8C%96%E8%B5%84%E9%87%91%E9%A1%B9%E7%9B%AE%E6%8C%87%E5%8D%97.pdf (accessed on 6 June 2023).

2762 Shanghai Municipal Commission of Economy and Information Technology. (2015). *Measures for Administration of Special Funds for Industrial Transformation, Upgrading and Development in Shanghai,* available at: https://app.sheitc.sh.gov.cn/sjxwxgwj/666015.htm (accessed on 6 June 2023). On 19 February 2020, Shanghai Municipal Commission of Economy and Information Technology and Shanghai Municipal Finance Bureau issued notice to extend the validity of this measure to 25 August 2020. Shanghai Municipal Commission of Economy and Information Technology, Shanghai Municipal Finance Bureau. (2020). *Notice of Shanghai Municipal Commission of Economy and Information Technology and Shanghai Municipal Finance Bureau on Extending the Validity of the Measures for Administration of Special Funds for Industrial Transformation, Upgrading and Development in Shanghai*, available at: http://www.sheitc.sh.gov.cn/cyfz/20200220/0020-684999.html (accessed on 6 June 2023). After that date, there is no further information about further extending the validity of this measure.

2763 Shanghai Municipal Commission of Economy and Information Technology. (2020). *Shanghai Municipal Measures for the Administration of Special Funds for Promoting High Quality Industrial Development*, available at: https://app.sheitc.sh.gov.cn/sjxwxgwj/687110.htm (accessed on 6 June 2023). On 26 October 2022, Shanghai Municipal Commission of Economy and Information Technology and Shanghai Municipal Finance Bureau issued notice to extend the validity of this measure to 22 October 2024. Finance Bureau of the Shanghai Municipal Commission of Economy and Informatization. (2022, 26 October). *Notice Extending the Validity Period of the 'Shanghai Municipal Measures for the Administration of Special Funds for Promoting High Quality Industrial Development (Provisional)'*, available at: https://app.sheitc.sh.gov.cn/sjxwxgwj/693759.htm (accessed on 6 June 2023).

2764 Shanghai Municipal Commission of Economy and Information Technology. (2017). *Detailed Implementation Rules for Special Support for Software and Integrated Circuit Industry Development*, available at: http://service.shanghai.gov.cn/XingZhengWenDangKuJyh/XZGFDetails.aspx?docid=REPORT_NDOC_002078 (accessed on 6 June 2023). According to Art. 24, this document expired on 31 December 2020.

2765 Shanghai Municipal Commission of Economy and Information Technology. (2017). *Shanghai Integrated Circuit Design Enterprise Engineering Products Special Support Measures for the First Round of Films*, available at: https://www.sh-italent.com/Article/201905/201905310045.shtml (accessed on 6 June 2023).

2766 Beijing Municipal Bureau of Economy and Information Technology. (2022). *2022 Guidelines for the Implementation of Beijing High-Tech Industrial Development Funds*, available at: http://www.ncsti.gov.cn/zcfg/zcwj/202201/t20220131_58034.html (accessed on 6 June 2023).

- Shenzhen Special Supporting Plan for IC[2767]; and
- Hangzhou Special Funds for IC Industry Development[2768].

Companies benefit enormously from such programs. For example, SMIC received government subsidies totalling RMB 1,024 billion (~EUR 134 million) in 2017, RMB 1,107 billion (~EUR 142 million) in 2018 and RMB 2,039 billion (~EUR 264 million) in 2019[2769]. These subsidies accounted for about 82%, 148% and 114% of SMIC's net profit during the respective periods, which suggests that SMIC would have suffered losses in 2018 and 2019 without these subsidies[2770]. This is an example of how companies' bottom lines in this industry can be deeply dependent on government support.

In another example, it was announced in December 2018 that Guowei Technology successfully applied for funding for its "*Development and Application of EDA System in the Whole Process of Chip Design*" sub-project under the government Major S&T Projects program, and would be receiving RMB 200 million (~EUR 25,6 million) from the central Government and RMB 200 million (~EUR 25,6 million) from the Shenzhen Municipal government, totalling approximately RMB 400 million (~EUR 51,2 million)[2771]. As of the date of the announcement, the company had received the first tranche of this funding, amounting to approximately RMB 75 million (~EUR 9,6 million)[2772].

19.4.4. Below Market Lending and Preferential Loans

The Government uses preferential financing tools, including below market rate bank loans and policy-based loan guarantees, to support IC companies[2773]. This support manifests in a variety of ways depending on local policy implementation.

Beijing provides subsidized loan interest to local enterprises for the construction of approved IC projects[2774]. Through this program, an approved project may receive, for no more than three

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2767 Shenzhen Bureau of Industry and Information Technology. (2019). Operating Procedures for the Special Support Program for Integrated Circuits of Shenzhen Bureau of Industry and Information Technology, available at: http://gxj.sz.gov.cn/xxgk/xxgkml/zcfgjzcjd/gygh/content/post_2019779.html (accessed on 6 June 2023).

2768 Hangzhou City Municipal People's Government. (2018). Notice of General Office of Hangzhou Municipal People's Government on Printing and Distributing the Special Policy for Further Encouraging the Accelerated Development of the Integrated Circuit Industry, available at: https://www.hangzhou.gov.cn/art/2018/8/8/art_1496071_4388.html (accessed on 6 June 2023).

2769 Caijing Magazine. (2020, July 16). *Will SMIC become another PetroChina?*, available at: http://m.caijing.com.cn/api/show?contentid=4682500 (accessed on 6 June 2023).

2770 *Ibid.*

2771 PR Newswire. (2018, December 27). *Guowei Technology successfully applied for the National Major S&T Special Funds*, available at: https://www.prnasia.com/story/232923-1.shtml (accessed on 6 June 2023).

2772 *Ibid.*

2773 See, e.g., Wuhan People's Government. (2020). *Several Policies of Wuhan for Accelerating the High Quality Development of IC Industry*, Arts. 7–9, available at: http://fgw.wuhan.gov.cn/zfxxgk/zfxxgk_1/zc/202012/t20201201_1523420.html (accessed on 6 June 2023).

2774 Beijing Municipal Bureau of Economy and Information Technology. (2014). Notice of the Beijing Municipal People's Government on Issuing Several Policies for Further Promoting the Development of the Software Industry and Integrated Circuit Industry in Beijing, Art. 18, available at: http://www.beijing.gov.cn/zhengce/zfwj/zfwj/szfwj/201905/t20190523_72690.html (accessed on 6 June 2023).

years, discounted interest rate loans during the construction period of the project. Interest rates may be discounted by 1,5% and, in certain areas, up to 2%[2775].

Until October 2022, the Jiangsu provincial government provided loan interest subsidies to newly-approved and completed IC manufacturing projects. The loan interest subsidies were provided to support fixed asset purchases made during the construction period of a project[2776]. The Jiangsu government also offered loan interest subsidies to support technology upgrades in the software and IC design industries. The amount of the subsidies is not specified[2777].

In addition, some of the funds discussed earlier also provide support to the IC industry through subsidised loans, such as the central Industrial Transformation and Upgrading Funds (Made in China 2025)[2778], Shanghai Special Fund for Industry Transformation and Upgrading Development[2779], Shanghai Special Fund for Promoting High Quality Industrial

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2775 See Beijing Municipal People's Government. (2001). Implementation Opinions on Implementing the Several Policies of State Council for Encouraging the Development of Software Industry and IC Industry, Art. 32, available at: https://www.beijing.gov.cn/zhengce/zfwj/zfwj/szfwj/201905/t20190523_72336.html (accessed on 13 June 2023).

2776 Jiangsu Provincial People's Government. (2001). Notice of Jiangsu Provincial Government on Printing and Distributing Several Policies of Jiangsu to Encourage the Development of Software Industry and Integrated Circuit Industry, Art. 34, available at: http://www.js.gov.cn/xxgk/project/P0201606/P020160620/P020160620568385628245.pdf (accessed on 6 June 2023). On 28 October 2022, Jiangsu Provincial People's Government issued the Decision on Abolishing and Amending Some Administrative Normative Documents, which invalidated this document. People's Government of Jiangsu Province. (2022). Decision of the People's Government of Jiangsu Province on Abolishing and Amending Some Administrative Regulatory Documents, available at: http://www.jiangsu.gov.cn/art/2022/11/7/art_46143_10655484.html (accessed on 6 June 2026).

2777 Standing Committee of Jiangsu Provincial People's Congress. (2007). *Jiangsu Software Industry Promotion Regulations*, Arts. 41, 47, available at: https://flk.npc.gov.cn/detail2.html?NDAyOGFiY2M2MTI3Nzc5MzAxNjEyN2M1ZmM2YjA2Y2E (accessed on 6 June 2023).

2778 MOF. (2016). *Measures for Administration of Industrial Transformation and Upgrading (Made in China 2025) Fund*, available at: http://jjs.mof.gov.cn/zxzyzf/gyzxsjzj/201702/t20170214_2534902.htm (accessed on 6 June 2023).

2779 Shanghai Municipal Commission of Economy and Information Technology. (2015). *Measures for Administration of Special Funds for Industrial Transformation, Upgrading and Development in Shanghai*, available at: https://app.sheitc.sh.gov.cn/sjxwxgwj/666015.htm (accessed 26 October 2022). On 19 February 2020, Shanghai Municipal Commission of Economy and Information Technology and Shanghai Municipal Finance Bureau issued notice to extend the validity of this measure to 25 August 2020. Shanghai Municipal Commission of Economy and Information Technology. (2020, August 25). *Notice Regarding the Extension of Measures for Administration of Special Funds for Industrial Transformation, Upgrading and Development in Shanghai*, available at: http://www.sheitc.sh.gov.cn/cyfz/20200220/0020-684999.html (accessed on 6 June 2023). After that date, there is no further information about further extending the validity of this measure.

Development[2780] and Beijing Special Fund for the Development of High-tech, Precision and Advanced Industries[2781].

China's policy banks (see Chapter 6) – such as the CDB and Export-Import Bank of China (*'EXIM'*) – also provide low interest rate loans to IC enterprises[2782]. For example, in 2014, EXIM provided a loan of RMB 70 million (~EUR 8,57 million) at an interest rate of 2,65% to Bengbu 3E Semiconductor Co., Ltd. for chip manufacturing[2783]. Further, EXIM reportedly signed loan contracts with Wuxi Shennan[2784] in 2014 and 2018 and provided the enterprise with a loan totalling RMB 720.47 million (~EUR 92,3 million), at an interest rate that was 5% below the benchmark rate[2785]. The EXIM Shenzhen Branch also reportedly signed a loan contract with Shennan Circuits Co., Ltd. (*'Shennan Circuits'*) in 2018 and provided it with a loan of RMB 200 million (~EUR 25,6 million) at the benchmark interest rate[2786]. In 2015, CDB provided a low-interest loan of RMB 20 billion (~EUR 2,9 billion) to Sanan Optoelectronics[2787], including at least RMB 140 million (~EUR 20 million) at an interest rate of 1,2%[2788]. In the same year, CDB provided several low-interest loans (1,2%) totalling RMB 1,67 billion (~EUR 240 million) to SMIC and its subsidiaries[2789]. In 2019, CDB provided JCET[2790] with a line of credit

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2780 Shanghai Municipal Commission of Economy and Information Technology. (2020). *Shanghai Municipal Measures for the Administration of Special Funds for Promoting High Quality Industrial Development*, available at: http://www.jsgt.org.cn/Upload/ueditor/file/20221028/1666938485572083.pdf (accessed on 6 June 2023). On 26 October 2022, Shanghai Municipal Commission of Economy and Information Technology and Shanghai Municipal Finance Bureau issued notice to extend the validity of this measure to 22 October 2024. Shanghai Municipal Commission of Economy and Information Technology. (2020, August 25). *Notice Regarding the Extension of Measures for Administration of Special Funds for Industrial Transformation, Upgrading and Development in Shanghai*, available at: https://app.sheitc.sh.gov.cn/sjxwxgwj/693759.htm (accessed on 6 June 2023).

2781 Beijing Municipal Bureau of Economy and Information Technology. (2022). *2022 Guidelines for the Implementation of Beijing High-Tech Industrial Development Funds*, available at: http://www.ncsti.gov.cn/zcfg/zcwj/202201/t20220131_58034.html (accessed on 6 June 2023).

2782 State Council. (2015). *Made in China 2025*, Art. 4.3, available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 6 June 2023).

2783 Securities Times (STCN). (2020). *Response of Elec-Tech International Co., Ltd. to Shenzhen Stock Exchange's inquiry about the 2019 annual report*, available at: http://epaper.stcn.com/paper/zqsb/html/2020-06/20/content_1482184.htm (accessed on 8 June 2023).

2784 Wuxi Shennan is a subsidiary of Shennan Circuits, an IC company headquartered in Shenzhen, China. See Shennan Circuits. *About Shennan Circuits*, available at: https://www.scc.com.cn/scc/en/gysn/index.html (accessed 26 October 2022); see also Shennan Circuits. (2020). *Announcement No. 2020-024: Announcement on provision of guarantees for subsidiaries*, available at: https://pdf.dfcfw.com/pdf/H2_AN202003191376703881_1.pdf (accessed on 6 June 2023).

2785 Kangda Law Firm. (2019). *Supplemental legal opinion of Kangda Law Firm on Shennan Circuits' public offering of convertible bonds*, pp. 4-3-47, 4-3-48. Cninfo, available at:. http://static.cninfo.com.cn/finalpage/2019-12-20/1207179755.PDF (accessed on 6 June 2023).

2786 *Ibid.*, p. 4-3-48.

2787 Sanan Optoelectronics is a semiconductor company publicly listed on the Shanghai Stock Exchange. See Sanan. *About the group*, available at: https://www.sanan-e.com/about.html (accessed on 6 June 2023).

2788 CMS. (2015). *CMS's study report on Sanan Optoelectronics*, p. 1, available at: http://pdf.dfcfw.com/pdf/H3_AP201510150011054878_1.pdf (accessed on 6 June 2023).

2789 Shanghai Stock Exchange. (2016). *Prospectus of Semiconductor Manufacturing International Corporation*, p, 1-1-79, available at: http://static.sse.com.cn/bond/bridge/information/c/201701/b62c89ed9b8347a184de867a13a51388.pdf (accessed on 6 June 2023).

2790 JCET is a leading IC company in China, and its revenue in 2020 exceeded RMB 26 billion. See JCET. *About JCET*, available at: https://www.jcetglobal.com/cn (accessed on 6 June 2023); JCET. (2020). *2020*

amounting to RMB 16 billion (~EUR 2,1 billion) at a rate of 3%[2791]. Finally, according to a supplemental legal opinion issued in 2019 by Kangda Law Firm, CDB signed a loan contract with Shennan Circuits in 2016 and provided it with a loan of RMB 230 million (~EUR 31,3 million) at a rate of 1,2% for its purchase of imported machinery equipment[2792], and CDB Jiangsu Branch signed a loan contract with Wuxi Shennan in 2019 and provided it with a loan of RMB 400 million (~EUR 51,7 million) at a rate to be adjusted according to a benchmark interest rate below the prevailing commercial rate[2793].

19.4.5. Government-Directed and Supported Overseas Acquisitions

Policy directives issued by the Government have prompted a wave of foreign, often state-backed, acquisitions within the semiconductor industry[2794]. This has been seen by policymakers as a way for China to reduce the technology gap between China and countries with more mature semiconductor industries. A marked increase in Chinese acquisitions of foreign semiconductor firms occurred beginning in 2014[2795]. Before 2014, Chinese companies engaged in fewer than 10 M&A transactions involving US-based semiconductor firms[2796]. By 2016, the number of transactions increased to acquisitions involving 34 US companies. Likewise, the value associated with such acquisitions increased from USD 213,8 million (~EUR 161 million) before 2014 to an estimated USD 11 billion (~EUR 9,8 billion) by the end of 2017[2797].

Although the ownership structures of Chinese semiconductor firms are relatively complex, the involvement of government guidance in these cross-border M&A efforts appears significant. The principal source of government facilitation of such acquisitions is direct capital from the State itself. Examples of this include the acquisition of several US-based semiconductor companies by Beijing E-Town, an SOE owned by the Beijing municipal government; Beijing NavTech's acquisition of a Swedish foundry, Silex Microsystems, made possible through financial backing from the Big Fund and its Beijing sister fund and JCET's acquisition of Singapore-based STATS ChipPAC, which was fully backed by the CDB and the Big Fund[2798]. In fact, according to the US Trade Representative, many of these Chinese firms pursuing

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annual report, available at: https://www.jcetglobal.com/uploads/&e6&b1&9f&e8&8b&8f&e9&95&bf&e7&94&b5&e7&a7&91&e6&8a&80&e8&82&a1&e4&bb&bd&e6&9c&89&e9&99&90&e5&85&ac&e5&8f&b82020&e5&b9&b4&e5&b9&b4&e5&ba&a6&e6&8a&a5&e5&91&8a.pdf (accessed on 6 June 2023).

2791 Tianfeng Securities. (2019). *JCET*, p. 26, available at: https://pdf.dfcfw.com/pdf/H3_AP201905281332513167_1.pdf?1601214722000.pdf (accessed on 6 June 2023).

2792 Kangda Law Firm. (2019). *Supplemental legal opinion of Kangda Law Firm on Shennan Circuits' public offering of convertible bonds*. Cninfo, available at: http://static.cninfo.com.cn/finalpage/2019-12-20/1207179755.PDF (accessed on 6 June 2023).

2793 *Ibid.*

2794 USITC Report 2019, p. 13.

2795 *Ibid.*

2796 *Ibid.*, p. 15

2797 *Ibid.*

2798 *Ibid.*, p. 16; see also US Trade Representative. (2018). Findings of the investigation into China's acts, policies and practices related to technology transfer, intellectual property and innovation under Section 301 of the Trade Act of 1974, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed on 6 June 2023).

acquisitions acknowledge adhering to state guidance in these transactions[2799], suggesting that non-market forces remain strong within the Chinese semiconductor industry and impact the industry globally.

Moreover, the increase in Chinese M&A activity coincided with a renewed Government push to develop China's semiconductor industry and the creation of national investment funds targeting the industry, including the Big Fund, which is described in detail in Section 19.2.1.1 above. Indeed, the Big Fund was created as an explicit means "*to promote industry upgrades*' through the utilisation of '*mergers and regroupings*' in order to '*encourage domestic* [Chinese] *integrated circuit companies to strengthen international cooperation, integrate international resources and open up international markets*"[2800].

Chinese firms' outbound investments extend far beyond US industry, with other advanced economies with established semiconductor industries reporting similar spikes in acquisitions led by Chinese investors. Below is an overview of relevant examples of Chinese acquisitions of foreign semiconductor companies.

2799 Beijing E-Town's stated goal through international acquisitions is to "*effect technology transfer, and in doing so, achieve the government's stated objective of reducing China's reliance on IC imports*". *Ibid.*, p. 116. Further, 'Beijing E-Town seeks to integrate government leadership and market operations in building a system of funds . . . '. *Ibid.*, p. 115. In addition, Goldstone Investment Co., Ltd., an investment fund involved in Seagull International's acquisition of US-based semiconductor firm OmniVision, stated in a regulatory filing that the outbound acquisition of OmniVision satisfies the company's objective of advancing the development of China's national IC industry. *Ibid.*, p. 119.

2800 State Council. (2014). *The National Outline of the Development of the Integrated Circuit Industry Officially Announced*, available at: http://www.gov.cn/xinwen/2014-06/24/content_2707281.htm (accessed on 6 June 2023); see The Ministry of Industry and Information Technology. (2014) . *'National Integrated Circuit Industrial Development Promotion Outline' officially announced*, available at: https://www.gov.cn/xinwen/2014-06/24/content_2707522.htm (accessed on 13 June 2023).

Examples of Chinese Acquisitions of Foreign Companies

Beijing E-Town/iML

Exar Corp., a California-based firm, sold its subsidiary Integrated Memory Logic Ltd. (*'iML'*), a leading provider of analogue and mixed-signal IC's for flat-panel displays, to China-based Beijing E-Town Chipone Technology Co., Ltd. (*'Beijing E-Town'*) in June 2016[2801]. The sale was valued at USD 136 million (~EUR 122,9 million)[2802]. Beijing E-Town was established as an SOE by the Beijing Municipal government in 2009. It is owned and controlled by the Beijing Economic-Technological Development Zone State Asset Management Office, a development and investment initiative created by the Beijing Municipal government[2803].

Jianguang Asset Management/Freescale Semiconductor

In May 2015, Chinese government-owned Jianguang Asset Management Co. Ltd. acquired Freescale Semiconductor from Netherlands-based NXP Semiconductors for USD 1,8 billion (~EUR 1,6 billion)[2804].

CDB/STATS ChipPAC

In August 2015, financed by the Big Fund and CDB, JCET acquired STATS ChipPAC, a Singapore-based packaging and testing company[2805].

Uphill Investment Co./Integrated Silicon Solutions

In June 2015, California-based Integrated Silicon Solutions (*'ISSI'*) was acquired by Uphill Investment Co. (*'Uphill'*), a Chinese investment group comprising state-backed funds including SummitView Capital, eTown MemTek, Hua Capital and Huaqing Jiye Investment Management Co. Ltd.[2806]. Boosted by a wave of state support and funding, Uphill was able to outbid a US-based company, Cypress Semiconductor Corp., with the winning bid price reaching USD 23 per share – much higher than the initial price proposed by ISSI of USD 18,19 per share[2807].

NavTech/Silex Microsystems

In 2016, the Swedish foundry Silex Microsystems was acquired by the Chinese firm Beijing NavTech Integration Co. Ltd., an acquisition that was made possible through financial backing from the Big Fund and its Beijing sister fund[2808]. After the acquisition, NavTech announced that it had established a new plant that employed Silex's technology in one of Beijing's state-run industrial parks[2809].

Seagull/Omnivision

In January 2016, OmniVision Technologies, Inc., a US-based primary developer in advanced digital imaging solutions[2810], was acquired by Seagull International Ltd. and Seagull Acquisition Corp. (*'Seagull'*) for roughly USD 1.9 billion (~EUR 1,7 billion). Seagull is composed of several investment funds that are fully backed by the State and operate in pursuit of state objectives[2811]. These funds include Hua Capital, CITIC Capital Holdings Ltd. and Goldstone Investment Co., Ltd.[2812].

Nexperia/Newport Wafer Fab

In July 2021, Nexperia, a subsidiary of the Chinese firm Wingtech, acquired Newport Wafer Fab ('*NWF*') for USD 87 million (~EUR 73,6 million)[2813]. NWF is one of the United Kingdom's largest producers of silicon chips[2814]. Wingtech is largely backed by a number of stakeholders with direct links to the Government, including Wuxi Guolian Industrial Investment Co. Ltd. and Kunming Industrial Development Equity Investment Fund Partnership[2815].

Midea/Kuka

2801 US Trade Representative. (2018). Findings of the investigation into China's acts, policies and practices related to technology transfer, intellectual property and innovation under Section 301 of the Trade Act of 1974, pp. 114–115, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed on 6 June 2023).

2802 *Ibid.*

2803 *Ibid.*

2804 Perlman, M. (2015, May 28). *NXP sheds unit to Chinese asset firm in $1.8B deal*. Law 360, available at: https://www.law360.com/articles/660887/nxp-sheds-unit-to-chinese-asset-firm-in-1-8b-deal (accessed on 26 October 2022).

2805 i-Micro News. (2015, September 1). *JCET completes acquisition of STATS ChipPAC to ascend to a leading OSAT player globally*, available at: https://www.i-micronews.com/better-technology-stronger-together/?cn-reloaded=1 (accessed 26 October 2022).

2806 US Trade Representative. (2018). Findings of the investigation into China's acts, policies and practices related to technology transfer, intellectual property and innovation under Section 301 of the Trade Act of 1974, p. 117, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed on 7 June 2023).

2807 *Ibid.*

2808 OECD Report 2019, p. 45.

2809 *Ibid.*

2810 Several of OmniVision's products include highly integrated, single-chip complementary metal-oxide semiconductor (CMOS) image sensors for consumer and commercial applications.

2811 The fund consortium is composed of Hua Capital Management Co., Ltd., CITIC Capital Holdings Limited and GoldStone Investment Co., Ltd. ; see at https://www.sec.gov/Archives/edgar/data/1106851/000104746915005341/a2225031zdefm14a.htm

2812 US Trade Representative. (2018). Findings of the investigation into China's acts, policies and practices related to technology transfer, intellectual property and innovation under Section 301 of the Trade Act of 1974, p. 119, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed on 7 June 2023).

2813 See Sweney, M. (2021, July 5). *Chinese-owned firm acquires UK's largest semiconductor manufacturer*. The Guardian, available at: https://www.theguardian.com/business/2021/jul/05/chinese-owned-firm-acquires-uks-largest-semiconductor-manufacturer (accessed on 7 June 2023); see also Shead, S. (2021, July 7). *The Chinese firm behind the acquisition of the UK's largest chip plant is state backed, analysis shows*. CNBC, available at: https://www.cnbc.com/2021/07/07/nexperia-owner-wingtech-is-backed-by-chinese-government-analysis-says.html (accessed on 7 June 2023).

2814 See Sweney, M. (2021, July 5). *Chinese-owned firm acquires UK's largest semiconductor manufacturer*. The Guardian, available at: https://www.theguardian.com/business/2021/jul/05/chinese-owned-firm-acquires-uks-largest-semiconductor-manufacturer (accessed on 7 June 2023); see also Shead, S. (2021, July 7). *The Chinese firm behind the acquisition of the UK's largest chip plant is state backed, analysis shows*. CNBC, available at: https://www.cnbc.com/2021/07/07/nexperia-owner-wingtech-is-backed-by-chinese-government-analysis-says.html (accessed on 7 June 2023).

2815 *Ibid.*

In December 2016, following approval from the Committee on Foreign Investment in the US, China-based Midea Group Co. Ltd. acquired German robot-maker Kuka AG for USD 5 billion (~EUR 4,5 billion)[2816].

Cross-border acquisitions by Chinese investors have abated to some degree since the surge in 2015-2016[2817]. There was a substantial reduction in the number of M&A deals reported between 2017 and 2018[2818]. Reasons cited for this decline include the imposition by Chinese authorities of restrictions on capital outflows in response to downward pressure on the RMB and declining Chinese foreign currency reserves resulting from external pressures, such as additional US tariffs[2819].

In addition, an increase in scepticism among countries concerning any foreign investment in sectors deemed to be strategic or economically sensitive, such as the semiconductor sector, has also been cited by research institutes such as the Peterson Institute for International Economics as a potential explanation for the decline in acquisitions[2820]. In particular, cross-border acquisitions by Chinese firms have been subject to increased scrutiny in the foreign investment national security review mechanisms of the US and other economies in recent years due to concerns about the potential role of the State in such deals. While acquisitions are ostensibly undertaken in pursuit of commercial interests, Chinese authorities have indicated that they intend to continue to advance the Chinese semiconductor industry through overseas acquisitions of foreign technology and leveraging joint ventures with established global leaders in order to facilitate technology transfer[2821].

19.4.6. Government Support for Importation of Foreign Technologies

The Government encourages the acquisition of foreign technologies and equipment through the elimination of tariffs and '*import interest subsidies*', which are subsidies for a portion of the interest charged on loans associated with imports of eligible technologies and/or equipment[2822].

2816 The 2016 deal has since raised concerns among German policymakers for fear that key technology is falling into the hands of the Chinese government. See USITC Report 2019, p. 16; see also Basu, P. (2017). *Midea completes acquisition of German robot maker Kuka*. S&P Global, available at: https://www.spglobal.com/marketintelligence/en/news-insights/trending/giozjwvrkhepx0jql2sshw2 (accessed on 26 October 2022).

2817 See Hanemann, T., Gao, C., and Lysenko, A. (2019, January 13). *Net Negative: Chinese Investment in the US in 2018*. Rhodium Group, available at: https://rhg.com/research/chinese-investment-in-the-us-2018-recap (accessed on 7 June 2023).

2818 *Ibid.*

2819 Harada, I., Kitazume, K., & Manabe, K. (2019, August 18). *China allows weaker yuan but still fights downward pressures*. Nikkei Asia, available at: https://asia.nikkei.com/Spotlight/Datawatch/China-allows-weaker-yuan-but-still-fights-downward-pressures (accessed on 7 June 2023).

2820 Peterson Institute for International Economics. (2022, September 1). *US security scrutiny of foreign investment rises, but so does foreign investment*, available at: https://www.piie.com/blogs/realtime-economic-issues-watch/us-security-scrutiny-foreign-investment-rises-so-does-foreign (accessed on 7 June 2023) (noting that while investment in the United States has increased generally, Chinese investment in the United States "*fell by nearly two-thirds . . . in 2020, as China limited outbound investment and CFIUS came to be perceived as a brick wall for Chinese investors*").

2821 Ernst, D. (2015). From catching up to forging ahead: China's policies for semiconductors. *East-West Center*, p. 24, available at: http://dx.doi.org/10.2139/ssrn.2744974 (accessed on 7 June 2023).

2822 NDRC. (2016). *Catalogue of Technologies and Products Encouraged for Import (2016 Edition)*, available at: http://www.gov.cn/xinwen/2016-11/10/5131002/files/fc2f507838534b9fb0ee2a459fb47c12.pdf (accessed on 7 June 2023).

For IC manufacturers, MOF stipulates that for "*imported equipment and its supporting technologies, accessories and spare parts* [...] *customs duties will* [...] *be exempted within the scope of the original regulations*"[2823]. In addition, as discussed in Section 19.4.6 above, the *Catalogue of Technologies and Products Encouraged for Import* actively promotes importation of technologies and products listed in it, by exempting such imports from customs duties, tariffs and import value-added tax. Further, if technologies purchased from abroad are listed in the *Catalogue of Technologies and Products Encouraged for Import*, software and IC enterprises that license or purchase such technologies from foreign enterprises can also apply for import interest subsidies[2824].

Sub-national governments also follow the national policy and sometimes provide further support for certain imports. For example, the Shanghai government provides funding from its budget to IC design enterprises that purchase technology use rights or ownership from overseas enterprises for technologies included in the *Catalogue of Technologies and Products Encouraged for Import* stipulated by the State[2825].

Guangdong provincial government policy also calls for "*mak[ing] good use of the national import interest subsidies*" and actively promoting the importation of technologies and products listed in the national catalogue[2826]. The policy provides for provincial special funds to support prioritized imports. Guangdong's *Supplementary Catalogue of Technologies and Products Encouraged for Import* further specifies advanced technologies, key components, and other resources that are in short supply in the province, with a particular focus on energy-saving and environmentally-friendly products[2827].

19.5. MARKET DISTORTIONS

19.5.1. MARKET DISTORTIONS IN A TRANSNATIONAL VALUE CHAIN

As described in Section 19.1.2, the semiconductor supply chain is globally interconnected and interdependent[2828]. Indeed, transnational divisions of labour have supported high levels of economic efficiency and innovation in the industry and have contributed to the success of the semiconductor value chain[2829]. As a result, distortions in one segment of the supply chain have the potential to cause cross-border distortions throughout other segments of the supply chain as

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2823 MOF. (2021). Circular [2021] No. 4 on Import Tax Policies to Support the Development of the Integrated Circuit Industry and Software Industry, available at: http://www.gov.cn/zhengce/zhengceku/2021-03/29/content_5596564.htm (accessed on 7 June 2023).

2824 NDRC. (2016). *Catalogue of Technologies and Products Encouraged for Import (2016 Edition)*, available at: http://www.gov.cn/xinwen/2016-11/10/5131002/files/fc2f507838534b9fb0ee2a459fb47c12.pdf (accessed on 7 June 2023).

2825 Shanghai Government. (2017). *Several Policies on Further Encouraging the Development of Software Industry and Integrated Circuit Industry in Shanghai*, Art. 9, available at: https://www.shanghai.gov.cn/nw41430/20200823/0001-41430_52159.html (accessed on 7 June 2023).

2826 See General Office of the People's Government of Guangdong Province. (2011). *Several Opinions on Promoting Imports*, Arts., 4, 14, available at: http://www.gd.gov.cn/gkmlpt/content/0/140/post_140146.html (accessed on 7 June 2023).

2827 *Ibid.*

2828 MERICS Report 2021, pp. 2, 7.

2829 *Ibid.*

well, and the effects of such distortions may in fact be magnified as they ripple throughout other segments of the supply chain. As described by the OECD[2830]:

> *[T]he provision of large amounts of support by one country may still cause significant trade distortions that are a serious concern for others. The semiconductor industry relies today on a complex web of supply chains that span multiple jurisdictions, firms, and universities, and for which the 'grease' remains the cross-border movement of parts, machines, talent and technology. This implies that any trade distortion will be magnified and transmitted across many companies and markets.*

Consistent with this principle, the fact that Chinese state involvement continues at a level that "*may significantly distort China's semiconductor sector*"[2831] has important implications for segments of the value chain that exist in other countries, including with respect to the allocation of capital and labour and the potential for future distortions.

19.5.2. Distortions in Resource Allocation in the Economy

The 14th National FYP identifies technological independence as an objective and specifically recognizes the semiconductor industry as a critical sector in which such self-reliance is key[2832]. To achieve this objective, China has consistently employed state industrial policies that provide an artificial advantage to beneficiaries of those policies in a manner that distorts markets and blurs distinctions between private and state actors and interests.

19.5.2.1. Distortions in Capital Allocation

Using equity investments, tax relief, grants and the other mechanisms described in Section 19.4 above, the Government has drastically increased the availability of public funding in the semiconductor sector. At the same time, China's implementation of regulatory and industrial policies has also distorted the availability of capital in other sectors, including in 'soft' technologies such as consumer-oriented internet platforms and services.

The origins of these distortions are two-fold. First, China's strong emphasis on building capacity and self-sufficiency in the semiconductor sector and provision of benefits to achieve that aim have encouraged private investors to divert capital investments away from alternative sectors, including the soft technology sector, where such benefits are less available[2833]. Coupled with these increased financial incentives, Chinese authorities have also actively discouraged investments in '*soft technology*' through regulatory actions. Most notably, China launched a domestic regulatory crackdown against the soft technology sector in 2021 (see also Section 2.3.1), levying fines and imposing legislative restrictions that increased penalties for antitrust

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2830 OECD Report 2019, p. 98.

2831 MERICS Report 2021, p. 19.

2832 State Council. (2021). Outline of the 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 of the People's Republic of China (March 2021), Recital of Part 2, available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 7 June 2023).

2833 Lee, Y. N. (2021, June 19). *China has gone 'too far' in clamping down on big tech–that will hurt economic growth, says analyst*. CNBC, available at: https://www.cnbc.com/2021/06/30/chinas-crackdown-on-tech-firms-will-hurt-economic-growth-says-analyst.html (accessed on 7 June 2023).

and data privacy violations and targeted some of the largest technology firms in China[2834]. In fact, the Government has cited investments in some consumer-oriented '*soft tech*' internet sectors, such as gaming and video streaming, as examples of the '*disorderly expansion of capital*' that should be curbed[2835].

As China's crackdown on Chinese soft technology firms became apparent, entrepreneurs and venture firms pivoted away from internet businesses[2836]. These investors sought out new opportunities, finding them in hard technologies such as semiconductors and robotics, where Chinese government policies were clearly more favourable.

Qiming Venture Partners is a prime example of the influx of capital into the semiconductor industry and others, with deep technology start-ups now accounting for an estimated 40% of the firm's portfolio, up dramatically from 10% in 2014[2837]. Several media outlets reported in early 2022 that Chinese semiconductor start-ups, including chip makers, IC designers and others, received USD 8,8 billion (~EUR 8,1 billion) in funding in 2021, more than six times the amount invested in comparable companies in the US[2838] and four times the amount allocated for comparable European companies in the EU's newly proposed '*Chips Act*'[2839]. As further evidence of the shift in capital towards the semiconductor sector over the course of 2021, the US Patent and Trademark Office recorded a 30% rise in semiconductor-related filings by applicants based in China from 2020 to 2021[2840].

Meanwhile, state investment in the semiconductor industry called for under the 2014 Guidelines is estimated to be valued at USD 150 billion (~EUR 138,3 billion) in the aggregate, and the

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2834 Forbes. (2022, July 13). *Alibaba and Tencent fined in China tech crackdown*, available at: https://www.forbes.com/sites/qai/2022/07/13/alibaba-and-tencent-fined-in-china-tech-crackdown/?sh=627fefc33dac (accessed on 26 October 2022); Zhai, K. (2022, January 19). *China notifies firms of tougher investment rules for big tech*. Wall Street Journal, available at: https://www.wsj.com/articles/china-notifies-firms-of-tougher-investment-rules-for-big-tech-11642581909 (accessed on 8 March 2022).

2835 Central Economic Work Conference. (2020). *The Central Economic Work Conference was held in Beijing Xi Jinping Li Keqiang delivered an important speech*, available at: http://www.gov.cn/xinwen/2020-12/18/content_5571002.htm (accessed on 7 June 2023). See also Goldman Sachs. (2021). *Is China investable?*, available at: https://www.goldmansachs.com/insights/pages/gs-research/is-china-investable/report.pdf (accessed on 7 June 2023).

2836 See CSIS, available at: https://www.csis.org/blogs/new-perspectives-asia/beijings-tech-sector-crackdown-sends-clear-warning-companies-going (accessed on 7 June 2023); Weiland, D. (2021, November 8). *Xi Jinping's crackdown on Chinese tech firms will continue*. The Economist, available at: https://www.economist.com/the-world-ahead/2021/11/08/xi-jinpings-crackdown-on-chinese-tech-firms-will-continue (accessed on 7 June 2023).

2837 Bloomberg. (2022, January 10). *China venture funding hits record US $131 billion despite crackdown, as start-ups pivot to hard tech*. South China Morning Post, available at: https://www.scmp.com/tech/article/3162764/china-venture-funding-hits-record-us131-billion-despite-crackdown-start-ups (accessed on 26 October 2022).

2838 *Ibid*.

2839 The EU introduced the '*Chips Act*' on 8 February 2022. For more details, see European Commission. (2022, February 8). *Digital sovereignty: Commission proposes Chips Act to confront semiconductor shortages and strengthen Europe's technological leadership* [Press release], available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_729 (accessed on 7 June 2023); see also Lomas, N. (2022, February 8). *Europe's Chips Act to bake in up to €2BN in funding support for startups and scale-ups*. Tech Crunch, available at: https://techcrunch.com/2022/02/08/eu-chips-act/ (accessed on 7 June 2023).

2840 MERICS Report 2021, p. 18.

industry is seen as a principal beneficiary of the State's allocation of USD 1,4 trillion (~EUR 1,3 trillion) in its 14th FYP to '*strategic industries*'[2841]. The effect of the twin policies of making large state contributions and diverting private investment to the semiconductor sector has been to significantly impact the allocation of capital across technology industries, distorting the capital allocations that would otherwise exist in a free market.

19.5.2.2. DISTORTIONS IN THE LABOUR MARKET

Government policies designed to encourage development of the semiconductor sector have also resulted in distortions in China's labour market. In response to the 14th FYP's prong to attract foreign talent to work in the semiconductor industry, sub-national governments have established various incentive programs, including grant and tax relief programs, to encourage qualified personnel to accept positions in China.

Given the broader financial support offered by the central and sub-national governments, Chinese semiconductor firms are not only able to pay more for highly-qualified researchers and engineers, but are also able to hire substantially more than foreign competitors without comparable financial support. For example, in 2017, prominent Chinese state-backed firms SMIC and Tsinghua Unigroup were able to successfully recruit a former CEO from UMC, as well as leading researchers from TSMC, two of Taiwan's leading foundries[2842]. Chinese state-backed financial support has attracted more than 1 300 senior engineers from Taiwan since 2014, lured by substantial pay raises and subsidised living arrangements[2843]. The combination of direct state financial support and government policies and investments encouraging the flow of private capital into the domestic semiconductor industry enables domestic firms to offer salaries for engineers, researchers and managers that are several times higher than those offered by competing foreign companies[2844].

2841 Ezell, S. (2021). *Moore's Law under attack: The impact of China's policies on global semiconductor innovation*. Information Technology and Innovation Foundation, available at: https://itif.org/publications/2021/02/18/moores-law-under-attack-impact-chinas-policies-global-semiconductor/ (accessed on 7 June 2023); Wong, D. (2020). *How can foreign technology investors benefit from China's new infrastructure plan?* China Briefing from Dezan Shira and Associates, available at: https://www.china-briefing.com/news/how-foreign-technology-investors-benefit-from-chinas-new-infrastructureplan/ (accessed on 8 November 2022).

2842 See Lee, Y. (2022, March 4). *China lures chip talent from Taiwan with fat salaries and perks*. Reuters, available at: https://www.reuters.com/article/us-china-semiconductors-taiwan-insight/china-lures-chip-talent-from-taiwan-with-fat-salaries-perks-idUSKCN1LK0H1 (accessed on 7 June 2023).

2843 The vice chairman and president of Novatek Microelectronics, a Taiwanese integrated chip designer, stated that it would be difficult to match offers from Chinese rivals, also noting that a percentage of Novatek's employees had left the firm for higher offers in China over the last two years. See Lee, Y. (2022, March 4). *China lures chip talent from Taiwan with fat salaries and perks*. Reuters, available at: https://www.reuters.com/article/us-china-semiconductors-taiwan-insight/china-lures-chip-talent-from-taiwan-with-fat-salaries-perks-idUSKCN1LK0H1 (accessed on 7 June 2023); see also USITC Report 2019, p. 17.

2844 See Foreign Policy. (2021, February 16). *Semiconductors and the U.S.-China innovation race*, available at: https://foreignpolicy.com/2021/02/16/semiconductors-us-china-taiwan-technology-innovation-competition/ (accessed on 7 June 2023) ("[China] remains dependent on foreign talent for technical know-how and has used its resources to aggressively attract employees from top firms. Chinese companies offer double or triple existing salaries of chip experts in Taiwan"); WTW. (2022). *Semiconductor industry will continue to lead the pay trend in 2022 across Asia Pacific*, available at: https://www.wtwco.com/en-

19.5.2.3. POTENTIAL FOR FUTURE EXCESS CAPACITY

Despite the recent global shortage of semiconductor products, China's industrial policies and increased financing for the development of the sector raise the potential risk of future overcapacity in the sector, especially in light of past experiences with China creating overcapacities through industrial policies (see Chapters 14 and 15). The rapid expansion of China's semiconductor industry resulting from China's industrial policies and the associated resource misallocation has the potential to lead to substantial over-investment, coupled with a reduction in financial viability and increased credit risk for firms operating in the sector[2845]. Furthermore, the implementation of industrial policies by sub-national governments has the potential to spark a competitive race between provinces and municipalities in China focused on boosting local growth, rather than industrial synergies on a national scale[2846]. This fragmented implementation of industrial policies has the potential to lead to duplicative investments[2847].

Between January and October 2020, an estimated 58 000 semiconductor firms were created in China, with the majority of these firms being small-to medium-sized[2848]. This fast-paced growth in the number of firms has led to speculation that "[p]*otential overcapacity will likely expose these small companies to high price volatility, low profit margin and operational inefficiencies*"[2849]. In particular, smaller domestic semiconductor companies that receive less government support may face high credit risk from large debts and rising overcapacity in low-end logic chips[2850]. Further, in August 2021, Moody's Investor Service published a report projecting that the manufacturing (i.e., fabrication) segment of the industry is of particular concern due to the large amounts of capital spending needed to establish and operate fabrication plants[2851].

Moreover, the potential for future overcapacity in certain segments of the semiconductor supply chain is also of concern. Chinese polysilicon, a key element used in the fabrication process of certain types of ICs and the manufacture of solar cells[2852], has been the subject of several anti-

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HK/Insights/2022/07/semiconductor-industry-will-continue-to-lead-the-pay-trend-in-2022-across-asia-pacific#:~:text=China's%202021%20semiconductor%20salary%20increase,rate%20in%20the%20High%20Tech (accessed on 8 June 2023) ("*In 2022* [in the Asia Pacific region], *77% of semiconductor companies increased the starting salary of fresh graduates. Among those, the starting salary of master's and doctoral graduates in China went up by 10%, which is higher than the salary increase rate of the overall market.*")

2845 Moody's Investor Service. (2021). *Semiconductor self-reliance will support tech growth but pose overcapacity risk*, available at: http://testtoo1.oss-cn-hangzhou.aliyuncs.com/pdf/20210802/20210802092915_32270.pdf (accessed on 7 June 2023) ('*Moody's Report*').

2846 Ernst, D. (2015). From catching up to forging ahead: China's policies for semiconductors. *East-West Center*, pp. 49–50, available at: http://dx.doi.org/10.2139/ssrn.2744974 (accessed on 7 June2023).

2847 *Ibid.*, pp. 27, 50.

2848 Mozur, P. (2021, July 19). *The failure of China's microchip giant tests Beijing's tech ambitions*. New York Times, available at: https://www.nytimes.com/2021/07/19/technology/china-microchips-tsinghua-unigroup.html (accessed on 26 October 2022).

2849 Moody's Report, p. 7.

2850 *Ibid.*

2851 *Ibid.*

2852 Polysilicon is a high-purity form of silicon and is used as an input material in the solar and semiconductor industries. See Zhu, X., et al. (2021). *A high power-conversion-efficiency voltage boost converter with MPPT for wireless sensor nodes.* Multidisciplinary Digital Publishing Institute, available at:

subsidy investigations, led by the US and the EU[2853]. Although China is currently unable to produce high-purity semiconductor-grade polysilicon, the Government is currently advancing state-led investments and policies that seek to develop these capabilities in the near term[2854].

A past example demonstrates the potential degree of the concern. A 2012 Commission investigation into Chinese subsidisation of silicon photovoltaic modules, including cells and wafers, found that Chinese production capacity represented 150% of global consumption, which amounted to roughly over 55 gigawatts[2855]. The Commission estimated Chinese excess production capacity to be 27 gigawatts, or 90% of global demand, and noted that this was almost twice the entire EU's demand of 15 gigawatts in that year[2856].

19.5.3. Government Interventions Distorting the Market Found in Past Trade Defence Investigations

As noted in the preceding section, the Government is pursuing the capability to produce high-purity polysilicon for the manufacture of semiconductor wafers. The findings of various trade defence proceedings in multiple jurisdictions–described in further detail below–regarding polysilicon and other products for the solar energy industry may be relevant.

In *Crystalline Silicon Photovoltaic Modules and Key Components*[2857], the Commission found that the Chinese banking system from which firms operating in the photovoltaic ('*PV*') industry obtained loans was under substantial state influence. Further, the Commission found that the Government maintains a policy to provide direct preferential lending to the PV industry, enabling Chinese banks to offer firms in the industry below-market interest rates[2858]. The Commission's investigation determined that many Chinese producers in the PV sector received substantial preferential treatment in the form of preferential policy loans, grant programs, direct tax exemptions, import tariff relief and provision of goods and services for LTAR. The Commission concluded that in total, Chinese state-owned banks control more than two-thirds of the Chinese banking market[2859].

In the US, the Department of Commerce in the investigation on *Crystalline Silicon Photovoltaic Cells*[2860] found subsidisation on the basis of the following alleged subsidy programs in China, including:

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8401396/ (accessed on 7 June2023) (describing PV cell use in complementary metal-oxide-semiconductor ('*CMOS*') technology).

2853 See Section 19.5.3 below.

2854 MERICS Report 2021, p. 46.

2855 European Commission. (2013, June 4). *Memo: EU imposes provisional anti-dumping duties on Chinese solar panels* [Press Release], available at: http://europa.eu/rapid/press-release_MEMO-13-497_en.htm (accessed on 7 June 2023).

2856 *Ibid.*

2857 See Council Implementing Regulation (EU) No 1239/2013 imposing a definitive countervailing duty on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the People's Republic of China; *OJ L 325, 5.12.2013, p. 66–213.*

2858 *Ibid.*, recital 170.

2859 *Ibid.*, recital 161, as well as Chapter 6.

2860 China did not participate in this investigation. See US Department of Commerce. (2012). Crystalline silicon photovoltaic cells, whether or not assembled into modules, from the People's Republic of China: Final affirmative countervailing duty determination and final affirmative critical circumstances determination,

Preferential Lending:

1. Policy Loan
2. Preferential Export Financing from the Export-Import Bank of China
3. Preferential Loans to SOEs

Income Tax Programs:

1. '*Two Free, Three Half*' Program for FIEs
2. Preferential Tax Program for HNTE
3. *Enterprise Income Tax Law*, R&D Program

Other Tax Programs:

1. Tariff Exemption for Imported Equipment
2. VAT Rebates on FIE Purchases of Chinese-made Equipment

Government Provision of Goods and Services for LTAR:

1. Provision of Land for LTAR
2. Provision of Polysilicon for LTAR
3. Provision of Electricity for LTAR

Grants:

1. Golden Sun Demonstration Program
2. Direct Government Grants from Provincial and Local Governments
3. Bonus for Employees from Government

In *Crystalline Silicon Photovoltaic Products* [2861], the US found that Chinese producers enjoyed benefits under many subsidy schemes, including:

Preferential Lending:

1. Policy Loans
   i. *Renewable Energy Law*[2862]
   ii. *Medium and Long-Term Development Plan for Renewable Energy*
   iii. The *Interim Measures for the Administration of the Financial Subsidy Fund for Renewable and Energy-Saving Building Materials*
2. Preferential Export Financing from the Export-Import Bank of China

Income Tax Programs:

1. Tax Offsets for R&D under the *Enterprise Income Tax Law*[2863]

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77 Fed. Reg. 63788, available at: https://www.govinfo.gov/app/details/FR-2012-10-17/2012-25564 (accessed on 7 June 2023).

2861 See US Department of Commerce. (2014). Countervailing duty investigation of certain crystalline silicon photovoltaic products from the People's Republic of China: Final affirmative countervailing duty determination, 79 Fed. Reg. 76962, available at: https://www.federalregister.gov/documents/2014/12/23/2014-30071/countervailing-duty-investigation-of-certain-crystalline-silicon-photovoltaic-products-from-the (accessed on 7 June 2023).

2862 The law provides financial incentives, such as national funding, preferential loans and tax preferences for the development of renewable energy projects. See *ibid.*

2863 The law allows enterprises that are engaged in R&D in hi-tech sectors to deduct certain expenditures that are listed in 'hi-tech sectors with primary support of the State and the guideline of the latest key priority developmental areas in the High Technology Industry'. See *ibid.*

2. Preferential Tax Program for HNTEs[2864]

Government Provision of Goods and Services for LTAR:

1. Provision of Land for LTAR
2. The Provision of Inputs for LTAR
   i. Polysilicon for LTAR[2865]
   ii. Aluminium extrusions for LTAR
   iii. Electricity for LTAR
   iv. Solar glass for LTAR

Grants: Golden Sun Demonstration Program

19.6. CHAPTER SUMMARY

The Government has issued numerous plans, directives and other documents pertaining to the semiconductor industry – at the national, regional and municipal levels. Taken together, these policies show the high degree of government intervention in the sector. Through these and other instruments, the Government exercises substantial direction and control over the development and functioning of the sector (Section 19.3). China's domestic market is served in large part by large SOEs or nominally private firms in which government-backed investments play a substantial financial role, together accounting for a dominant share of Chinese production capacity in the semiconductor industry (Section 19.1.2).

The most substantial tools employed by the Government to develop and manage the semiconductor industry are government-backed investment funds. Of these funds, the Big Fund is the largest in terms of scale. Through this Fund, as well as other smaller sister funds established at the provincial and municipal levels, the Government has expanded its ownership share in domestic semiconductor firms. Utilizing government-backed investment funds set up by state agencies, ostensibly as limited partnership financers that provide fresh capital and heavily impact investment decision-making, the State has increased its ownership of semiconductor assets while providing substantial injections of capital[2866]. Through such public investments as well as government regulatory and industrial policies, the State has diverted capital from other sectors, in particular seeking to incentivise the movement of private investment and talent from soft technology sectors, such as consumer internet services, toward hard technology sectors, including semiconductors[2867].

Beyond development plans and government-backed investment funds, the Government's intervention in the sector has taken shape, *inter alia*, through preferential lending programs, tax

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2864 Several of the Chinese companies found to have benefited from this program saw their income tax rates reduced from 25% to 15% for tax returns filed within the period of investigation. *Ibid.*

2865 Polysilicon is an important component used in the manufacturing process of semiconductors.

2866 Luong, N., Arnold, Z., & Murphy, B. (2021). *Understanding Chinese government guidance funds: An analysis of Chinese-language sources*. CSET, p. 5, available at: https://cset.georgetown.edu/wp-content/uploads/CSET-Understanding-Chinese-Government-Guidance-Funds.pdf (accessed on 7 June 2023).

2867 Goldman Sachs. (2021). *Is China investable?*, available at: https://www.goldmansachs.com/insights/pages/gs-research/is-china-investable/report.pdf (accessed on 7 June 2023).

relief programs and other direct financial support measures – in each case, implemented at both the national level and sub-national levels–designed to encourage firms to undertake projects in the IC industry[2868]. In addition, China also implements trade-related measures and VAT rebate policies designed to decrease imports of goods also produced in China, while facilitating imports of key technologies for which there is little domestic supply. Lastly, several trade defence investigations have established that the Government has consistently granted different types of state support measures to producers of materials that are also used in the semiconductor supply chain (Section 19.5.3).

2868 SIA Whitepaper 2021, p. 3.

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20.1. INTRODUCTION

The railway industry is multifaceted, involving a wide array of goods and services. The main functional segments of this industry include:

- component manufacturers that make rolling stock, signalling equipment and electrical components;
- construction businesses that build infrastructure such as tracks and stations;
- technical service providers, including engineers and designers[2869];
- system integrators that assemble the component rail supplies into functioning rail systems[2870];
- railway operators that drive trains, manage goods or passengers, and collect fares[2871]; and
- infrastructure managers that own and maintain the tracks, energy systems and stations[2872].

2869 Ecorys. (2019). *Study on the competitiveness of the Rail Supply Industry*. European Commission, p. 17 ('EC Study 2019').

2870 European Commission. (2019). *Report of the expert group on competitiveness of the European rail supply industry* ('Commission 2019 Railway Report'), p. 17; available at: https://ec.europa.eu/docsroom/documents/37829 (accessed on 14 June 2023).

2871 *Ibid.*

2872 *Ibid.*

The railway industry can also be segmented by the type of rail transit involved: passenger or freight[2873]. Passenger rail is further categorised into urban rail (including light and metro rail), conventional rail and high-speed rail[2874].

This chapter provides an overview of Chinese policies pertinent to the railway industry as a whole, with a focus on component manufacturers, and in particular the following three developments: innovation in the high-speed rail segment, China's emergence as the world's leading manufacturer of rolling stock and continued competition in the signalling equipment industry.

The chapter consists of five sections. Following this introduction, Section 20.2 outlines the Chinese railway industry, detailing the various component manufacturing segments that are the focus of this chapter, China's position in the global market and the key SOEs in this industry. Section 20.3 provides a comprehensive overview of several Chinese national and sub-national policies, plans and strategies that bear on the industry. Section 20.4 explores how China actively steers and intervenes into the market for the railway industry, and Section 20.5. concludes the chapter with a summary.

20.2. CHINESE RAILWAY INDUSTRY

China has strategically cultivated SOEs across the railway industry's individual segments and helped these SOEs capitalise on the rapid growth of China's domestic market. In recent years, Chinese policy has looked beyond the domestic market and pushed the SOEs to become global players in the railway industry.

20.2.1. MAIN INDUSTRY SEGMENTS AND ASSOCIATED SOES

China relies heavily on SOEs to execute its national strategies, and the railway industry is a prime example of the government's strategic division of SOEs across industry segments[2875] (see also Section 5.4). This section first details the component manufacturers among the SOEs – CRRC Corporation Limited (*'CRRC'*) and China Railway Signal & Communication Corporation (*'CRSC'*). It proceeds with an overview of China State Railway Group Co., Ltd. (*'China Railway'*), which not only serves as the principal railway operator in the country, but also plays an important role in the supervision of the railway industry as a whole. This section concludes with a note on China Railway Construction Corporation Limited (*'CRCC'*) and China Railway Engineering Corporation (*'CREC'*), the SOEs primarily responsible for

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2873 International Energy Agency. (2019). *The future of rail: Opportunities for energy and the environment*, pp. 20–21.

2874 International Energy Agency. (2019). *The future of rail: Opportunities for energy and the environment*, p. 21. The International Union of Railways defines high-speed rail as 'systems of rolling stock and infrastructure that regularly operate at or above 250 kph on new tracks or 200 kph on existing tracks.' Cory, N. (2021). *Heading off track: The impact of China's mercantilist policies on global high-speed rail innovation*. Information Technology & Innovation Foundation, p. 5 ('ITIF Heading off track 2021').

2875 Huang, D. (2018). Top-level design and fragmented decision-making: A case study of an SOE merger in China's high-speed rail industry. *Journal of Contemporary China, 27*(101), 152. https://doi.org/10.1080/10670564.2017.1363027 (accessed on 22 May 2023).

infrastructure construction and maintenance – segments not within the focus of this chapter but nonetheless important to understanding the scale of the industry.

20.2.2. COMPONENT MANUFACTURING

CRRC is China's largest manufacturer of conventional and high-speed rail rolling stock and locomotives, while CRSC is the country's leading producer of signalling equipment.

20.2.2.1. CRRC – ROLLING STOCK & HIGH-SPEED RAIL

China created its national champion in rolling stock in 2015, when the Government ordered the country's two largest rolling stock producers, state-owned China Northern Rail Group ('*CNR*') and state-owned China Southern Rail Group ('*CSR*') to merge. The new entity, CRRC, immediately became a leading global producer of rolling stock, '*especially to the developing world, with superior economies of scale due to their protected domestic market and strong pricing power*'[2876]. The merger was justified in part to avoid competition between CNR and CSR in overseas markets, after CSR submitted a bid for a rail project in Argentina, a region that CNR considered to be part of its constituency[2877]. CSR was criticised '*for harming the national interest through its vicious competition with CNR*' and '*damag*[ing] *the overall interests of related enterprises in the overseas market for its own private interests*'[2878].

CRRC primarily manufactures rolling stock, including for high-speed rail, urban and metro rail, and related components[2879]. In 2021, CRRC produced 86% of China's rolling stock and nearly 100% of its high-speed rail rolling stock due to '*the strong informal preference for local players*' of China Railway, the country's '*main rail operator and equipment purchaser*'[2880].

China's conventional rail rolling stock and locomotive production peaked in 2015 at 1 979 units and trended downward through 2020[2881]. The COVID-19 pandemic led to a pause in manufacturing in January and February of 2020, though production resumed in March[2882]. That year, manufacturing volume fell to 1 060 units from 1 319 in 2019[2883]. 2021 saw manufacturing levels rebound to 1 105 units[2884], and it was expected that with the end of COVID-19 pandemic, the production would go back to the initial figures[2885].

2876 Commission 2019 Railway Report, p. 157.

2877 Huang, D. (2018). Top-level design and fragmented decision-making: A case study of an SOE merger in China's high-speed rail industry. *Journal of Contemporary China, 27*(101), 152, 154. https://doi.org/10.1080/10670564.2017.1363027 (accessed on 22 May 2023).

2878 *Ibid.*

2879 MarketLine. (2022). *Company profile: CRRC Corporation Limited*, p. 16; CRRC. *Products services*. https://www.crrcgc.cc/en/g5129.aspx (accessed on 22 May 2023).

2880 Kratz, A., & Oertel, J. (2021). *Home advantage: How China's protected market threatens Europe's economic power*. European Council on Foreign Relations, p. 13.

2881 Shi, J. (2021, October 8). *Analysis on the 2021 China railway locomotives market and research and development*. Prospective Economist. https://www.qianzhan.com/analyst/detail/220/211008-88bf7868.html (accessed on 22 May 2023).

2882 *Ibid.*

2883 *Ibid.*

2884 China Industry Research Institute. (2022, January 24). *Statistics and analysis on the National Railway Locomotives manufacturing volume data in 2021*. AskCI.com. https://www.askci.com/news/data/chanxiao/20220124/1004421733217.shtml (accessed on 22 May 2023).

2885 Data for January through August 2022 shows 624 units manufactured, see *ibid.*

The production of high-speed locomotives began declining in 2016 due to reduced market demands stemming from overcapacity and the completion of planned railway construction[2886]. This trend continued as well as due to the impact of the COVID-19 pandemic[2887].

CRRC's revenues have declined commensurately from approximately RMB 41 billion (~EUR 5,4 billion)[2888] in 2021 to RMB 29 billion (~EUR 4,1 billion) in 2022[2889].

CRRC Group Co., Ltd. is a 100% state-owned entity that owns 50.73% of CRRC's publicly listed shares[2890].

As of February 2022, CRRC had established over 100 overseas subsidiaries or institutions and 18 overseas R&D centres[2891]. Subsidiary CRRC Zhuzhou Electronic Locomotives Co. Ltd. ('*CRRC ZELC*') has established manufacturing subsidiaries in Turkey, Malaysia and South Africa[2892]. CRRC has also won contracts to build subway cars for the US cities of Boston, Chicago, and Los Angeles[2893]. In Europe, CRRC has continued to expand its operations. For example, CRRC ZELC completed its acquisition of German company Vossloh AG's locomotives business in 2020 and delivered an order of electronic locomotives for Rail Cargo Hungaria in 2022[2894].

2886 Liu, H. (2023, July 7). *The market supply and demand situation of China's railway conventional rolling stock and locomotives and high-speed locomotives manufacturing industry in 2023: the inventory tends to be stable, and the demand for railway conventional rolling stock and locomotives still maintains an upward trend compared with high-speed locomotives.* Prospective Economist. https://ecoapp.qianzhan.com/detials/230714-16bbc393.html (accessed on 1 August 2023); Zhiyan Consultant. (2020). *Analysis of the current situation and trend of China's railway locomotives market in 2019: Chinese standards boost China's high-speed railway.* https://www.chyxx.com/industry/202005/868052.html (accessed on 1 August 2023).

2887 CRRC. (2021). *2020 annual report of CRRC.* http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=9900005127&stockCode=601766&announcementId=1209486803&announcementTime=2021-03-31 (accessed on 1 August 2023). Production declined from 3 474 units in 2016 to 1 021 in 2021, and only 345 units were produced from January 2022 through August 2022. Qianzhan Industry Research Institute. (2022). *2022 Foresee: Understanding the market size, competition structure, and development of China railway locomotives and high-speed locomotives manufacturing in 2022.* Forward Industry Research Institute. https://bg.qianzhan.com/trends/detail/506/221009-c58e7b10.html (accessed on 22 May 2023).

2888 Throughout the chapter, conversions to EUR are based on the average exchange rate during the timeframe referenced, using the exchange rate calculator publicly available on the European Central Bank's website. European Central Bank. (2023). *Euro foreign exchange reference rates.* https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html (accessed on 22 May 2023).

2889 CRRC. (2021). *2021 annual report of CRRC.* https://www.crrcgc.cc/Portals/71/Uploads/Files/2022/4-1/637844017201521768.pdf (accessed on 22 May 2023); CRRC. (2022). *2022 annual report of CRRC.* https://www.crrcgc.cc/Portals/71/Uploads/Files/2023/5-4/638188140477510592.pdf (accessed on 22 May 2023).

2890 Orbis. (2023). *CRRC Corporation Limited*, p. 100.

2891 Cao, Y. (2022, February 28). *The pillars of a great power - The internationalization of CRRC emphasizes more on the cooperation.* Tencent News. https://new.qq.com/rain/a/20220228A0315700 (accessed on 22 May 2023).

2892 *Ibid.*

2893 Kerr, M. (2017). *China's high-speed rail diplomacy.* U.S.-China Economic and Security Review Commission, p. 3.

2894 Vossloh. (2020). *Vossloh completes the sale of its locomotive business.* https://www.vossloh.com/en/press/press-releases/detail/pressdetail_34432.html (accessed on 8 June 2023);

20.2.2.2. CRSC – SIGNALLING EQUIPMENT

CRSC is the world's largest maker of train control systems[2895], primarily manufacturing signal products for dispatching and monitoring trains; communication products, including wireless communication systems, video surveillance, and train service information systems; emergency response equipment; and railway disaster prevention, mitigation, and detection systems[2896].

In 2022, CRSC reported a decline in production amid construction- and pandemic-related reduced market demand[2897]. It reported approximately RMB 40 billion (~EUR 5,7 billion) in total revenue that year, with RMB 29 billion (~EUR 4,1 billion) stemming from its railway transportation control system business[2898].

The Government wholly owns China Railway Signal & Communication Corporation, a holding company which in turn owns 62.69% of the publicly listed shares of CRSC[2899]. CRSC established a joint venture in China with Alstom in 1986 to form CASCO Signal Ltd. to produce signal system products[2900]. CRSC owns 51% of the company's shares, while Alstom controls 49%[2901]. CASCO Signal Ltd. earned USD 594 million (~EUR 520 million) in operating revenue in 2020, the last year with available financial data as of writing of this Report[2902]. The joint venture sells products and railway signal systems in Australia, Bangladesh, Egypt, Ethiopia, Djibouti, India, Korea, Laos, Mexico, Nigeria, Pakistan, Thailand and Uzbekistan, among others[2903].

20.2.3. RAILWAY SUPERVISION, OPERATION & INFRASTRUCTURE MANAGEMENT – CHINA RAILWAY

Railway Gazette. (2022, September 20). *Hungarian hybrid is ready to roll.* https://www.railwaygazette.com/traction-and-rolling-stock/hungarian-hybrid-is-ready-to-roll/62599.article (accessed on 8 June 2023).

2895 Abe, S. (2015, August 14). *After IPO, China Railway Signal & Communication aims for global expansion*. https://asia.nikkei.com/Business/After-IPO-China-Railway-Signal-Communication-aims-for-global-expansion (accessed on 8 June 2023).

2896 CRSC. *Product center*. http://www.crsc.cn/1108.html (accessed on 22 May 2023).

2897 CRSC (2022). *2022 annual report of CRSC*. http://www.sse.com.cn/disclosure/listedinfo/announcement/c/new/2023-03-24/688009_20230324_BTU4.pdf accessed on 22 May 2023); CRSC. (2021). *2021 annual report of CRSC*. http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2022/2022-3/2022-03-28/7919723.PDF (accessed on 30 May 2023).

2898 It produced 1 957 units of train control and interlocking system equipment (down from 2 700 in 2021), 570 000 signal relays (up from 460 000 in 2021), 15 339 switch conversion equipment units (down from 28 731 in 2021) and 30 445 transponder devices (in line with the 30 317 produced in 2021). CRSC. (2022). *2022 annual report of CRSC*. http://www.sse.com.cn/disclosure/listedinfo/announcement/c/new/2023-03-24/688009_20230324_BTU4.pdf (accessed on 22 May 2023).

2899 Orbis. (2023). *CRSC Corporation Limited*, p. 156.

2900 Orbis. (2023). *CASCO Signal Ltd.*, pp. 3, 23; CASCO. *A full range of rail traffic control system integrators*. https://www.casco.com.cn/about/Default.aspx (accessed on 22 May 2023).

2901 *Ibid*, p. 23.

2902 *Ibid*, p. 6.

2903 CASCO. *About us*. https://www.casco.com.cn/about/event.aspx (accessed on 8 June 2023).

China Railway is the world's largest operator of passenger and freight rail[2904] and also engages in railway construction[2905]. China Railway is wholly state-owned and plays an important role in the overall supervision and operation of the railway industry in China[2906] (see also Section 20.3.4). China Railway enjoys enormous buying power and has a documented history of excluding non-Chinese products in its role as the issuer of public procurement tenders (see Section 20.4.3). In 2022, China Railway reported RMB 1,1 trillion (~EUR 155,4 billion) in revenue[2907].

China Railway is also responsible for the uniform control and command of railway transport, allocation of transport capacity within the railway network, public welfare transport specified by national regulations, and railway revenue clearing and income management[2908].

20.2.3.1. HISTORICAL BACKGROUND OF CHINA RAILWAY

Prior to 2013, the Ministry of Railways was the regulatory agency governing the railway industry. In March 2013, the NPC began a reorganisation of the industry, including dissolving the Ministry of Railways and reallocating its functions[2909]. The result was the separation of railway operations from regulatory and inspection functions[2910].

A key component of the 2013 railway reforms was the establishment of two new entities: the National Railway Administration under the Ministry of Transport[2911] and China Railway Corporation – the entity that would eventually become China State Railway Group Co., Ltd., or China Railway (see Section 20.2.3.2).

The National Railway Administration created by this reform took over the administrative duties of the Ministry of Railways and responsibility for technical standards, railway work safety, and service and engineering quality[2912]. The Ministry of Transport is responsible for promulgating the overall development plans and policies of the railway sector[2913].

China Railway Corporation was established to fulfil the corporate duties of the Ministry of Railways[2914]. It was responsible for the uniform dispatching of railway transport, operating passenger and freight rail, undertaking designated and special transport tasks related to public

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2904 Fortune. (2022). *Global 500*. https://fortune.com/ranking/global500/ (accessed on 8 June 2023); China Railway. *Introduction of China State Railway Group Co., Ltd*. http://www.china-railway.com.cn/gsjs/gsjj/ (accessed on 22 May 2023).

2905 China Railway. *Industrial manufacturing*. http://www.china-railway.com.cn/zyyw/dyjy/gyzz/ (accessed on 22 May 2023).

2906 Orbis. (2023). *China State Railway Group Company Limited*, p. 17.

2907 China Railway. (2023, April 29). *China Railway publishes the final accounts of the year of 2022 and the first quarter of 2023*. http://www.china-railway.com.cn/xwzx/zhxw/202304/t20230429_127571.html#:~:=%E2%80%98 (accessed on 8 June 2023).

2908 China Railway. *Introduction of China State Railway Group Co., Ltd*. http://www.china-railway.com.cn/gsjs/gsjj/ (accessed on 22 May 2023).

2909 Xinhua News Agency. (2013, March 15). *State Council institutional reform and function transformation plan*. http://www.gov.cn/2013lh/content_2354443.htm (accessed on 22 May 2023).

2910 *Ibid.*

2911 *Ibid.*

2912 *Ibid.*

2913 *Ibid.*

2914 *Ibid.*

welfare, taking charge of railway construction and assuming primary responsibilities for railway safety[2915].

20.2.3.2. REORGANISATION INTO CHINA RAILWAY

In November 2017, 18 railway bureaus affiliated with China Railway Corporation reorganised into China Railway[2916], a wholly state-owned company managed by the Government[2917]. China initiated this reorganisation as part of broader SOE reforms to introduce more robust corporate governance into these entities[2918] (see also Section 5.2). As a matter of fact, prior to 2017, China Railway Corporation was considered an enterprise owned by '*the whole people*', and as a result, it did not have many of the functions associated with the corporate form, such as shareholder meetings and a board of directors[2919].

20.2.4. INFRASTRUCTURE CONSTRUCTION AND MAINTENANCE – CRCC AND CREC

CRCC is one of the largest railway construction groups in the world and has taken part in the construction of nearly all domestic railway projects[2920]. It alone has constructed 34 000 kilometres of rail, which accounts for more than 50% of the railways built since the founding of the PRC in 1949[2921]. CRCC also provides track maintenance services and the manufacture of equipment in support of track construction and maintenance[2922]. China Railway Construction Group Corporation, a wholly owned SOE, owns 51,13% of the publicly listed shares of CRCC[2923]. The company generated USD 156,5 billion (~EUR 148,6 billion) in operating revenue in 2022[2924].

CREC – principally through its largest, publicly listed, subsidiary, China Railway Group Limited[2925] – provides infrastructure support for the railway industry, including through R&D, design, manufacturing, installation and technical support for large railway construction machinery, including for bridges, railway turnouts, tunnel boring equipment[2926]. CREC is

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2915 *Ibid.*

2916 Xinhua News Agency. (2017, November 20). *The 18 railway bureaus have converted to China State Railway Group Co., Ltd.* http://www.gov.cn/guowuyuan/2017-11/20/content_5240920.htm (accessed on 22 May 2023).

2917 China Railway. *Introduction of China State Railway Group Co., Ltd.* http://www.china-railway.com.cn/gsjs/gsjj/ (accessed on 22 May 2023).

2918 Xinhua News Agency. (2023, February 1). *What changes have been brought about by the three-year reform of state-owned enterprises*? https://www.gov.cn/xinwen/2023-02/01/content_5739479.htm (accessed on 8 June 2023).

2919 Wang Jong/Central Broadcasting Network. (2019, June 20). *Farewell to 'China Railway Corporation'! These changes are coming to the newly restructured China State Railway Group.* https://www.thepaper.cn/newsDetail_forward_3725350 (accessed on 8 June 2023).

2920 CRCC. *Railway.* https://english.crcc.cn/col/col21594/index.html (accessed on 22 May 2023); Fortune. (2022, August 3). *China railroad construction.* https://fortune.com/company/china-railway-construction/global500/ (accessed on 8 June 2023).

2921 CRCC. *Railway.* https://english.crcc.cn/col/col21594/index.html (accessed on 22 May 2023).

2922 *Ibid.*

2923 Orbis. (2023). *China Railway Construction Corporation Limited*, p. 124.

2924 *Ibid*, p. 7.

2925 Orbis. (2023). *China Railway Engineering Corporation (CREC)*, p. 110.

2926 CRHIC. *About us.* http://en.crhic.cn/about.aspx?TypeId=1&FId=t1:1:1 (accessed on 22 May 2023).

wholly state-owned[2927]. The company had revenues of RMB 560,6 billion (~EUR 79,2 billion) that year[2928].

20.2.5. CHINA'S POSITION IN THE GLOBAL MARKET

According to the Commission 2019 Railway Report, China was the largest producer of rail components in the world, followed by the EU, the United States, Japan, India, Russia and Korea[2929]. China overtook the EU as the largest producer of rolling stock and locomotives in 2009[2930]. The country became a net exporter (i.e., exports exceeding imports) of rail products, including locomotives, rolling stock and signalling systems, the following year[2931]. Chinese companies accounted for more than one quarter of global rolling stock revenues between 2017 and 2019, 67% of all high-speed rail length and nearly half of all rolling stock in operation[2932]. China, the EU, and Japan each have about 20% of global urban passenger rail activity, according to a 2019 report issued by the International Energy Agency[2933].

In the 2010s, China experienced rapid growth in rolling stock manufacturing to satisfy domestic consumption needs, particularly for high-speed rail, even as China's export intensity for rail components (i.e., exports divided by production) lagged behind the United States, Japan, the EU and India[2934]. Over that same time, Chinese companies had not achieved comparable market share in the manufacture of signalling and electrification products, with Siemens, Thales and Bombardier composing 79% of the global market in 2017[2935]. China also led the world in patents in the railway industry over the same period[2936].

The COVID-19 pandemic brought quarantine restrictions and reduced rail passenger traffic that, along with the completion of much of the country's planned high-speed railway, contributed to a downturn in demand for high-speed rail construction and rolling stock[2937]. Investments in railway construction '*slowed amid concerns over lower returns on infrastructure and property investments and debt risks*'[2938]. As pandemic-related restrictions eased, total fixed-asset railway investment rebounded in the first quarter of 2023, increasing 6.6% compared to the first quarter of 2022 as China focused on new railway construction in

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2927 Orbis. (2023). *China Railway Engineering Corporation (CREC)*, p. 20.

2928 China Railway Group Limited. *Investor relations*. http://www.crecg.com/zgztywz/10199156/10203367/10203370/index.html (accessed on 22 May 2023).

2929 Commission 2019 Railway Report, p. 10. https://ec.europa.eu/docsroom/documents/37829

2930 Commission 2019 Railway Report, p. 10; EC Study 2019, p. 90.

2931 ITIF Heading off track 2021, p. 13.

2932 Kratz, A., Oertel, J. (2021). *Home advantage: How China's protected market threatens Europe's economic power*. European Council on Foreign Relations, p. 30.

2933 International Energy Agency (2019). *The future of rail: Opportunities for energy and the environment*, p. 15.

2934 Commission 2019 Railway Report, pp. 91-92, 95.

2935 *Ibid.*, p. 109.

2936 *Ibid.*, p. 124.

2937 Guo, Y., Li, R. (2023, January 8). *China's railway investment falls for a third straight year*. NikkeiAsia. https://asia.nikkei.com/Spotlight/Caixin/China-s-railway-investment-falls-for-a-third-straight-year (accessed on 22 May 2023); UBS. (2023). *China Railway Equipment: Beneficiaries of China's reopening; CRRC-H is our top pick in 2023*, p. 5.

2938 Guo, Y., Li, R. (2023, January 8). *China's railway investment falls for a third straight year*. NikkeiAsia. https://asia.nikkei.com/Spotlight/Caixin/China-s-railway-investment-falls-for-a-third-straight-year (accessed on 22 May 2023).

Xinjiang and Tibet[2939]. The component manufacturing segment, too, appears primed to rebound. China Railway procured 92 sets and 574 electric multiple unit trains ('EMUs')[2940] and locomotives in 2022, up from 30 sets and 450 units in 2021, while CRRC reported in September 2022 that its new orders rose 21% year-over-year[2941].

20.3. REGULATORY AND POLICY FRAMEWORK

Since the 1991 Railway Law permitted national, local, industrial and private railways[2942], China's regulatory and policy framework for its railway industry has targeted both domestic and foreign markets. Broadly, China has been seeking to enhance the competitiveness of its railway industry through investing in railway construction, establishing research laboratories to leverage local and natural resources for technological development, increasing manufacturing capacity for railway components (especially high-speed rail cars), and identifying local industry players for development. In addition to these efforts, China invested EUR 519 billion in its railway industry from 2016 to 2019[2943].

China's efforts at developing its domestic industry are intertwined with its international goals. For one, it has been translating international standards in the railway industry into Chinese standards to broaden the market of Chinese companies and make their products more competitive. In 2019, China outlined a plan to not only encourage domestic transportation companies to participate in construction projects, but also attract foreign investment into China's transportation industries.

On the other hand, several policies emphasise increasing railway component exports and investments abroad, building on the *'go out'* policy's mission of encouraging Chinese companies to enter foreign markets and the BRI's related goal of using foreign projects to alleviate overcapacity in the domestic market.

20.3.1. THE 14TH FYP FOR NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT

The 14th FYP (see Section 4.2.5) sets three goals pertaining to China's railway industry. The 14th FYP sets out to enhance the competitiveness of the supply chain supporting the development of high-speed rail and major technical equipment, including through promoting '*the R&D and the application of the CR450 high-speed-grade Chinese standard EMUs*' and

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2939 Zuo, M. (2023, April 10). *China's railway investment hits highest level since 2013 as infrastructure focus shifts to border regions, defence*. myNEWS. https://www.scmp.com/economy/china-economy/article/3216562/chinas-railway-investment-hits-highest-level-2013-infrastructure-focus-shifts-border-regions-defence (accessed on 8 June 2023).

2940 EMUs are electric multiple unit trains consisting of multiple railcars powered by electricity that do not require separate engines or locomotives. See Primidi. *What is electric multiple unit?* https://www.primidi.com/what_is_electric_multiple_unit#:~:text=Electric%20Multiple%20Unit%20An%20electric%20multiple%20unit%20or,within%20one%20or%20a%20number%20of%20the%20carriages (accessed on 8 June 2023).

2941 UBS. (2023). *China Railway Equipment: Beneficiaries of China's reopening; CRRC-H is our top pick in 2023*, p. 2.

2942 World Bank Group. (2017). *Railway reform: Toolkit for improving rail sector performance*, pp. 394–395.

2943 Commission 2019 Railway Report, p. 157.

'*genealogical Chinese standard subway trains*'[2944]. The 14th FYP also seeks to '*foster advanced manufacturing clusters*' and '*promote the innovation and development of industries such as* [...] *advanced rail transit equipment*'[2945]. The 14th FYP promotes the construction of '*smart railway*' using digital technology[2946].

20.3.2. PROVINCIAL AND MUNICIPAL FIVE YEARS PLANS

Several of China's provincial and municipal governments included plans for developing the railway industry in their own 14th FYPs. These subnational plans build on the national 14th FYP by linking specific cities and local SOEs to national plans and targets. In the railway industry, the local plans are an important mechanism to achieve national goals and targets, including with respect to the promotion of rail equipment exports and more sophisticated research laboratories and R&D centres. Local plans may empower research laboratories – typically housed or co-located with a state-owned rail manufacturer (including entities owned by local or provincial governments) – to leverage local and national resources and help with expanding their presence overseas.

20.3.2.1. CHANGCHUN

A good example is the 14th FYP for National Economic and Social Development and the Long-Range Objectives through the Year 2035 for Changchun in the Jilin province, already an important centre for the manufacture of railway vehicles, that seeks to enhance the city's status as a centre of advanced rail transit manufacturing[2947]. In addition to explicitly targeting an annual production capacity of 1 000 high-speed EMUs[2948], the plan promotes Chinese rail exports by explicitly supporting the efforts of CRRC Changchun Railway Vehicles Co., Ltd. ('*CRRC Changchun Railway*')[2949] to establish production, sales, maintenance, and service bases in other countries and to expand international cooperation on urban rail transit equipment[2950]. The plan also links CRRC Changchun Railway to national R&D efforts by supporting the company's role as host of the National Engineering Laboratory of System Integration of High-speed Rail Cars and the National Level Enterprise Technology Center[2951].

20.3.2.2. QINGDAO

2944 China's 'CR' series of EMUs are high-speed trains, with the number in the series referring to the top speed of the model (e.g., the CR450 can reach a top speed of 450 kph). See IT house. (2023, March 13). *The first CR450 unit of China's 400km-per-hour high-speed train has been painted and delivered smoothly.* https://i.ifeng.com/c/8O7GbQTMxNe (accessed on 8 June 2023); See Shangfangwen. (2021, February 6). *Breaking News! The CR450 Fuxing bullet train is under development this year with a speed of 400 kilometers per hour.* https://news.mydrivers.com/1/733/733347.htm (accessed on 8 June 2023).

2945 14th FYP, Article VIII, Section 3.

2946 *Ibid.*, Article XVIII, Table 9.

2947 Changchun Municipal People's Congress. (2021). *Changchun 14th Five-Year Plan for National Economic and Social Development* and *the Long-Range Objectives Through the Year 2035.* http://zwgk.changchun.gov.cn/szf_3410/bgtxxgkml/202104/P020210812372866904043.pdf (accessed on 22 May 2023).

2948 *Ibid.*

2949 *Ibid.*

2950 *Ibid.*

2951 *Ibid.*

Qingdao, a city in Shandong, includes in its 14th FYP for National Economic and Social Development and The Long-Range Objectives through the Year 2035 targets for innovation and developing new technologies in the high-speed rail industry[2952]. It seeks to build major science and technology innovation platforms including the National High-Speed Train Technology Innovation Centre and achieve breakthroughs on cutting-edge technologies such as high-speed maglev, intelligent rail transit, and autonomous train operation systems[2953]. The plan also focuses on developing an internationally competitive advanced manufacturing industrial base that includes AI-driven traction, braking, and network control systems for high-speed rail[2954].

20.3.2.3. NANJING, LUOYANG, ZHUZHOU AND TANGSHAN

Under its 14th FYP, the city of Nanjing plans to build independent supply chains across five industries, including the railway equipment sector, by the end of 2025[2955]. The Luoyang, Zhuzhou and Tangshan 14th FYPs also promote the development of railway equipment supply chains along with related R&D efforts and technical services[2956].

20.3.3. SECTORAL FIVE YEARS PLANS RELATED TO THE RAILWAY INDUSTRY

In addition to the national 14th FYP and related subnational plans, China has implemented sectoral plans targeting the railway industry during the 14th FYP period.

20.3.3.1. 14TH FYP FOR RAILWAY SCIENCE AND TECHNOLOGY INNOVATION

In 2021, the National Railway Administration promulgated the 14th Five Years Plan for Railway Science and Technology Innovation that set goals across the railway industry, including developing a high-speed rail capable of reaching 400 km/h, promoting an independent and world-leading railway technology standards system, and building more than 50 railway science and technology innovation bases by the end of 2025[2957]. The plan outlines several measures to accomplish these goals, including increasing R&D efforts for advanced carrier equipment technology to develop faster freight trains that carry more tonnage, promoting innovation in

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2952 Qingdao Municipal People's Congress. (2021). *Qingdao 14th Five-Year Plan for National Economic and Social Development* and *the Long-Range Objectives Through the Year 2035*. http://www.qingdao.gov.cn/zwgk/xxgk/bgt/gkml/gwfg/202112/t20211208_3928622.shtml (accessed on 22 May 2023).

2953 *Ibid.*

2954 *Ibid.*

2955 Nanjing Municipal People's Congress. (2021). *Nanjing 14th Five-Year Plan for National Economic and Social Development* and *the Long-Range Objectives Through the Year 2035*. http://jxw.nanjing.gov.cn/njsjjhxxhwyh/202104/t20210422_2892484.html (accessed on 22 May 2023).

2956 Luoyang Municipal People's Congress. (2021). *Luoyang 14th Five-Year Plan for National Economic and Social Development* and *the Long-Range Objectives Through the Year 2035*. https://www.henan.gov.cn/2021/12-31/2375119.html; Zhuzhou Municipal People's Congress. (2021). *Zhuzhou 14th Five-Year Plan for National Economic and Social Development* and *the Long-Range Objectives Through the Year 2035*. http://cwc.hnhgzy.com/c/2021-09-09/563936.shtml; Tangshan Municipal Committee of Communist Party of China. (2020). *Proposal for the Tangshan 14th Five-Year Plan for National Economic and Social Development* and *the Long-Range Objectives Through the Year 2035*. https://www.tsvtc.edu.cn/col/1681348558496/2023/04/10/1681377169036.html (accessed on 22 May 2023).

2957 National Railway Administration. (2021). *14th Five-Year Plan for Railway Science and Technology Innovation*. http://www.gov.cn/zhengce/zhengceku/2021-12/24/content_5664357.htm (accessed on 22 May 2023).

intelligent railways systems and other key, core technologies and developing ballast-less track structures complying with safety and comfort requirements[2958]. The plan also connects to the national *'Go Out'* policy and promotes the export of railway equipment, technology, standards and services[2959].

20.3.3.2. 14TH FYP FOR THE DEVELOPMENT OF A MODERN COMPREHENSIVE TRANSPORTATION SYSTEM

The 14th Five Years Plan for the Development of a Modern Comprehensive Transportation System, implemented by NDRC, emphasises the development of more advanced high-speed rail technology, including through smart railways and expanding China's railway system such that over 95% of cities with populations greater than 500 000 will be served by rail capable of reaching 250 km/h or more, to improve China's high-speed rail network[2960].

The Ministry of Transport has issued several documents to implement this plan. The Notice of the General Affairs Office of the Ministry of Transport on Issuing the Work Plan for Solidly Promoting the Implementation of Major Transportation Projects in the 14th Five Years Plan[2961] lists the major transportation projects to be constructed during this period, such as the construction of Sichuan-Tibet Railway, as well as some of the tools to support these projects, including accelerating the review and approval process of major projects and seeking out financial support from central budget funds, local fiscal money and bonds. The Standard System for Comprehensive Transportation[2962] guides standards development in China's transportation industries, including by promoting the coordination and integration of standards across the railway, highway, waterways, civil aviation and postal services industries.

20.3.4. STRONG TRANSPORTATION POWERHOUSE STRATEGY

In 2017, the 19th Party Congress (see Section 2.2.4) adopted a strategic decision to build the country into a '*transportation powerhouse*'[2963]. Subsequently, in September 2019, the Central Committee of the CCP and the State Council jointly issued the *Building a Powerful*

2958 *Ibid.*

2959 *Ibid.*

2960 National Development and Reform Commission ('NDRC'). (2022). *14th Five-Year Plan for the Development of Modern Comprehensive Transportation System.* https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/202203/t20220325_1320208.html (accessed on 22 May 2023).

2961 General Affairs Office of MOT. (2022). *Notice of the General Affairs Office of the Ministry of Transport on Issuing the Work Plan for Solidly Promoting the Implementation of Major Transportation Projects in the 14th Five-Year Plan.* https://www.gov.cn/zhengce/zhengceku/2022-05/20/content_5691467.htm (accessed on 1 August 2023).

2962 General Affairs Office of MOT. (2022). *Notice of the General Affairs Office of the Ministry of Transport on Issuing the Standard System for Comprehensive Transportation (2022)* https://www.gov.cn/zhengce/zhengceku/2022-09/24/content_5711662.htm (accessed on 1 August 2023).

2963 XinhuaNet. (2017, October 27). *Xi Jinping: Decisive victory in building a moderately prosperous society in all respects and winning the great victory of socialism with Chinese characteristics in the new era-Report made at the 19th National Congress of the Communist Party of China.* http://www.xinhuanet.com/politics/19cpcnc/2017-10/27/c_1121867529.htm (accessed on 22 May 2023).

Transportation Country plan[2964]. The plan divides goals and tasks for turning China into a '*transportation powerhouse*' into two phases: the first from 2021 to 2035 and the second from 2036 to mid-century[2965]. Under this plan, China intends to develop advanced high-speed rail and innovate in related technologies, including 600 km/h maglev systems and 400 km/h high-speed rail systems[2966]. The ambitions for the development of the railway transportation network are global in nature, with the outline calling for (i) domestic companies to participate in the construction of transportation enterprises to connect countries along the Silk Road Economic Belt and (ii) attracting foreign investment into China's transportation industries[2967].

Since 2021, the overall strategy has been complemented by several policies issued by the CCP, the State Council and the Ministry of Transport. The National Plan for a Comprehensive Three-dimensional Transportation Network, for example, targets the development of railways, with the goal of reaching 200 000 kilometres of railway, including 70 000 kilometres of high-speed railway, by 2035[2968]. The Medium and Long-term Development Plan for Science and Technology Innovation in the Field of Transportation (covering goals for 2021 through 2035) and the Five Years Action Plan for Accelerating the Construction of a Powerful Transportation Country (covering goals for 2023 through 2027) focus on R&D efforts[2969].

20.3.5. MADE IN CHINA 2025

Advanced rail equipment is one of the ten strategic sectors covered by Made in China 2025[2970] (see Section 4.2.3). The Made in China 2025 Roadmap lists the key products for the strategy targets, including high-speed rail locomotives and associated equipment[2971].

By 2019, the railway industry was among the industries that displayed the highest growth in competitiveness – evaluated through each industry's participation in global value chains and

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2964 CPC Central Committee and State Council's *Plan on Building a powerful transportation country*, September 2019. http://www.gov.cn/zhengce/2019-09/19/content_5431432.htm (accessed on 22 May 2023).

2965 *Ibid.*

2966 *Ibid.*

2967 *Ibid.*

2968 Central Committee of Communist Party of China & State Council. (2021). *National Plan for Comprehensive Three-dimensional Transportation Network.* http://www.gov.cn/gongbao/content/2021/content_5593440.htm (accessed on 22 May 2023).

2969 Ministry of Transport. (2022). *Medium and Long-term Development Plan for Science and Technology Innovation in the Field of Transportation.* http://www.gov.cn/zhengce/zhengceku/2022-04/06/content_5683595.htm (accessed on 22 May 2023); Ministry of Transport. (2023). *Interpretation of the 'Five-Year Action Plan for Accelerating the Construction of a Powerful Transportation Country (2023–2027)'.* http://www.gov.cn/zhengce/2023-04/23/content_5752770.htm (accessed on 22 May 2023).

2970 Preziosi, N., et al. (2019). *China: Challenges and prospects from an industrial and innovation powerhouse.* Publications Office of the European Union, p. 13. https://op.europa.eu/en/publication-detail/-/publication/c89434b2-88cd-11e9-9369-01aa75ed71a1/language-en (accessed on 22 May 2023); State Council. (2015). *Notice of the State Council on Issuing the 'Made in China 2025'.* http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 22 May 2023).

2971 NMSAC. (2015). *Made in China 2025 Key Technology Roadmap.* http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 22 May 2023).

revealed comparative advantage in exports – among the strategic sectors identified in Made in China 2025[2972].

Made in China 2025 set the following goals to be met by 2020:

- The R&D capabilities and the leading products of China's rail transit equipment segment will reach a global, advanced level;
- The rail transit equipment segment's sales output will exceed RMB 650 billion (~EUR 93,2 billion);
- Chinese railway companies' overseas business will exceed 30% of their overall business, and their service business will exceed 15% of their overall business;
- Key products will enter the European and US markets[2973]; and
- 40% of core basic components and key materials will be produced self-sufficiently[2974].

While no official announcement indicates that these goals were met, market data suggests that some were achieved. The Chinese rail transit equipment segment arguably reached a global, advanced level, with one source indicating that CRRC accounted for 53% of all sales in the industry worldwide[2975]. Another source estimated that China's conventional and high-speed locomotive sales reached RMB 350 billion (~EUR 44,4 billion)[2976], though this is only a portion of the rail transit equipment segment.

Outstanding goals to be met by 2025 include:

- China's rail transit equipment segment will develop a sound innovation system with the ability to continuously innovate;
- Chinese railway companies' overseas business will exceed 40% of their overall business, and their service business will exceed 20% of their overall business;
- China will become a leader in setting international standards in this field;
- China will build a world-leading and modern rail transit equipment industry and occupy the high-end of the industry's global supply chain[2977]; and
- 70% of core basic components and key materials will be produced self-sufficiently[2978].

2972 Preziosi, N., et al. (2019). *China: Challenges and prospects from an industrial and innovation powerhouse*. Publications Office of the European Union, pp. 109–11. https://op.europa.eu/en/publication-detail/-/publication/c89434b2-88cd-11e9-9369-01aa75ed71a1/language-en (accessed on 22 May 2023).

2973 National Advisory Committee for the Powerful Manufacturing Country Construction Strategy. (2015). *Made in China 2025 Key Technology Roadmap*. http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 1 August 2023).

2974 National Manufacturing Strategic Advisory Committee. (2016). *Development Catalogue for Core Basic Parts (Components), Key Basic Materials, Advanced Basic Craft/Technics, and Industry Technology Foundation*. *http://www.cm2025.org/show-14-126-1.html* (accessed on 1 August 2023).

2975 Huajing Information Network. (2021). *Analysis of the Scale and Competition of China's Rail Transit Equipment Market in 2020, with a High Degree of Industry Concentration*. https://baijiahao.baidu.com/s?id=1708321790307544822 (accessed on 1 August 2023).

2976 Ruiguan. (2020). *Analysis on Global Rail Transit Equipment Industry Overview and Development Trend* https://www.reportrc.com/article/20200315/4956.html (accessed on 1 August 2023).

2977 National Advisory Committee for the Powerful Manufacturing Country Construction Strategy. (2015). *Made in China 2025 Key Technology Roadmap*. http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 1 August 2023).

2978 NMSAC. (2016). *Development Catalogue for Core Basic Parts (Components), Key Basic Materials, Advanced Basic Craft/Technics, and Industry Technology Foundation*. *http://www.cm2025.org/show-14-126-1.html* (accessed on 1 August 2023).

The *Industrial Four Bases Catalogue* released by the National Manufacturing Strategic Advisory Committee ('NMSAC') focused on the 10 fields identified by Made in China 2025, including the advanced railway equipment industry, to provide guidance to enterprises and scientific research institutions in determining their development directions and goals and direct financial institutions to make use of various tools to support enterprises engaging in R&D and production[2979].

In conjunction with the *'go out'* policy, Made in China 2025 encourages Chinese companies in the railway industry to engage in overseas greenfield investments, mergers and acquisitions, and joint ventures and to establish R&D institutions, manufacturing bases, and marketing networks abroad, in part to compensate for perceived deficiencies in the domestic market, develop greater technical expertise and otherwise achieve China's industrial policy goals[2980] (see also Section 20.3.6).

20.3.6. INTERNATIONALISATION OF CHINA'S RAILWAY INDUSTRY: THE 'GO OUT' POLICY AND THE BELT AND ROAD INITIATIVE

More than two decades ago, in October 2000, the Fifth Plenary Session of the 15th Central Committee of the CPC proposed the *'go out'* policy with the goal of achieving breakthroughs in utilising both domestic and foreign resources and markets[2981]. This policy was subsequently implemented by the 10th FYP (2001-2005) for National Economic and Social Development[2982]. While the *'go out'* policy targets international markets, improving the competitiveness of domestic companies contributes to the motivation behind the policy. The *'go out'* policy emphasised that Chinese companies can make full use of both domestic and international resources to make up for any deficiencies in the domestic market, improve China's technologies, equipment, products and services, enable China to be in a better position to introduce new technologies and develop new industries, gradually form China's own transnational corporations and better participate in international competition[2983].

In expounding on this strategy in 2000, former Chinese president Jiang Zemin emphasised that "*only through boldly and actively 'going out' can we make up for the shortage of our domestic resources and markets, bring our technology, equipment and products to the outside world, be more qualified to introduce newer technologies and develop new industries, develop our own multinational companies from small to large to better participate in the competition of economic globalisation* [...]"[2984].

2979 *Ibid.*

2980 NMSAC. (2015). *Made in China 2025 Key Technology Roadmap*. http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 22 May 2023).

2981 See Xinhuanet. (2021, December 8). *1996, the strategy of 'bringing in' and 'going out'*. http://www.news.cn/politics/2021-12/08/c_1211478976.htm (accessed on 8 June 2023).

2982 National People's Congress. (2001). *10th Five-Year Plan (2001-2005) for National Economic and Social Development*, Chap. 17, § 4. https://www.gov.cn/gongbao/content/2001/content_60699.htm (accessed on 8 June 2023).

2983 Xinhuanet. (2021, December 8). *1996, the strategy of 'bringing in' and 'going out'*. http://www.news.cn/politics/2021-12/08/c_1211478976.htm (accessed on 8 June 2023).

2984 CPC Central Committee Party History and Literature Research Institute. (2012). *The Formation and Significance of Jiang Zemin's 'Going Out' Strategy*. https://www.dswxyjy.org.cn/n1/2019/0228/c425426-30909751.html (accessed on 4 August 2023).

The basic ideas articulated by Jiang Zemin touch on dynamics still relevant for the rail industry. Indeed, President Xi as recently as 2017 echoed these same principles, when he stated before the 19th Party Congress (see Section 2.2.4) that China must "*give equal emphasis to '"bringing in' and 'going global'" and "make new ground in opening China further*"[2985]. In particular, the concentrated nature of China's rail ecosystem, with its small number of differentiated state-owned firms that operate both domestically and under the '*Go Out*' strategy, creates a market environment in which these firms' actions abroad have a direct feedback loop to their domestic behaviour by generating economies of scale and providing another pathway for technology and knowledge transfer to China. For example, following reforms to the Ministry of Railways in 2013 (see Section 20.2.3.1), a strategy drafted by the GOC "*called for the establishment of a unified and centralised SOE dedicated to facilitating the export of China's* [high-speed railway] *industry*" through "*merging existing state firms*" to '*strengthen sectoral competitiveness through economies of scale*'[2986]. Through this strategy, "*the central government would play a crucial role in overcoming the fragmentation of interests and herding actors towards a common direction*"[2987]. The subsequent events that gave rise to the forced merger of CNR and CSR into CRRC created an SOE that would execute this strategy of centralising exports while simultaneously dominating China's domestic rolling stock market[2988].

This also shapes the domestic market and allows China to pursue its general industrial policy objectives. Chinese policymakers view the need to "*coordinat*[e] *domestic development and participat*[e] *in global governance*" as mutually reinforcing and necessary to compete in a globalised world[2989]. As such, "*the domestic economy must borrow, co-operate and interact with the global economy to meet (i) the new demands of globalisation, (ii) the new requirements and norms of economic development and (iii) the expectations of the international society*"[2990]. The export of high-speed railway construction and technology through the BRI promotes economic growth for the railway industry at home by locking foreign countries into using Chinese providers[2991].

China proposed the BRI in 2013 (see Section 4.2.4) and infrastructure connectivity via railways, roads, shipping, aviation, pipelines, and integrated space information networks is central to the BRI[2992]. With respect to the railway industry, part of BRI's goal involves using rail to connect

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2985 Yan, K. (2021). The Railroad Economic Belt: Grand strategy, economic statecraft, and a new type of international relations. *The British Journal of Politics and International Relations, 23*(2), p.263.

2986 *Ibid*, p.270.

2987 *Ibid*, p.270.

2988 *Ibid*, p.270–271.

2989 *Ibid*, p.267.

2990 *Ibid*, p.267.

2991 *Ibid*, p.267–268.

2992 State Council Information Office. (2019). *The Belt and Road Initiative: Progress, Contributions and Prospects*. http://english.scio.gov.cn/beltandroad/2019-04/22/content_76329624.htm (accessed on 22 May 2023). President Xi Jinping first announced the initiative during official visits to Kazakhstan and Indonesia in 2013 as a two-pronged plan: a land-based Silk Road Economic Belt and a Maritime Silk Road. McBride, J., Berman, N., & Chatzky, A. (2023). *China's Massive Belt and Road Initiative*. Council on Foreign Relations. https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative (accessed on July 5, 2023). The two plans were collectively known as the One Belt, One Road Initiative and eventually became the Belt and Road Initiative. *Ibid.*

certain regions, including Southeast Asia and East Africa, to China directly or via maritime ports[2993].

BRI also promotes improvements to railway networks connecting China with Europe[2994]. With the implementation of BRI, China has built inter-regional and inter-continental railway networks in cooperation with multiple countries[2995], including Laos, Thailand, Hungary, Serbia, Indonesia, Pakistan, Kyrgyzstan and Uzbekistan[2996]. China also cooperates with multiple countries on international railway operations[2997]. For instance, railway companies in China, Belarus, Germany, Kazakhstan, Mongolia, Poland and Russia have signed an agreement on deeper cooperation on China-Europe rail service[2998].

Railways built by Chinese companies in Africa, including in Nigeria, Kenya and Zambia, have constituted a major part of Chinese lending to African countries – a practice that has drawn criticism for creating '*debt traps*' while alleviating overcapacity concerns in China's domestic market (see also Section 20.4.5)[2999]. To support these efforts, the Ministry of Transport encourages local actors to improve service functions and transportation capabilities and establish logistics companies and cross-border e-commerce platforms[3000].

Furthermore, China has conditioned loans for infrastructure projects under the BRI on the adoption of Chinese technical standards, fostering dependence on Chinese companies for further construction and maintenance[3001]. NDRC has set benchmarks to promote the adoption of Chinese standards abroad, and by September 2019, China entered 90 bilateral agreements with 52 countries and regions regarding technical standardisation[3002]. Generally, technical standards are national or regional in nature[3003]. If one country adopts another's technical standards, the former will become locked into the latter's technology and must rely on suppliers

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2993 Haralambides, H., & Merk, O. (2020). *The Belt and Road Initiative: Impacts on global maritime trade flows*. International Transport Forum, pp. 8-10.

2994 State Council Information Office. (2015). *Action Plan on the Belt and Road Initiative*. http://www.scio.gov.cn/31773/35507/35519/Document/1535279/1535279.htm (accessed on 22 May 2023).

2995 People's Daily. (2021, February 7). *Build the Belt and Road in cooperation and improve the high-speed railway*. http://www.gov.cn/xinwen/2021-02/07/content_5585512.htm (accessed on 22 May 2023).

2996 Belt and Road Network. (2015). *Action plan on the Belt and Road Initiative*. https://www.yidaiyilu.gov.cn/ldzd/dejgfld/wjxz/86708.htm (accessed on 22 May 2023).

2997 *Ibid*.

2998 *Ibid*.

2999 Chen, Y. (2022). *African Railway ambitions meet China's Belt and Road*. National Bureau of Asian Research. https://www.nbr.org/wp-content/uploads/pdfs/publications/sr98_inroadsandoutposts_may2022.pdf (accessed on 8 June 2023); Condon, B., & The Associated Press. (2023, May 18). *'In a lot of the world, the clock has hit midnight': China is calling in loans to dozens of countries from Pakistan to Kenya*. Fortune. https://fortune.com/2023/05/18/china-belt-road-loans-pakistan-sri-lanka-africa-collapse-economic-instability/amp/ (accessed on 22 May 2023).

3000 Ministry of Transport. (2015). *Opinion on Implementing the Integrating into the National 'Belt and Road' Development Strategy to Build the 'Liaoning-Manchuria-Europe' Comprehensive Transportation Corridor*. https://xxgk.mot.gov.cn/2020/jigou/ysfws/202006/t20200623_3315187.html (accessed on 22 May 2023).

3001 Rühlig, T. (2023). Chinese Influence through Technical Standardization Power. *Journal of Contemporary China, 32*(139), p.65, 67. https://doi.org/10.1080/10670564.2022.2052439 (accessed on 1 August 2023).

3002 *Ibid*, p.60.

3003 *Ibid*, p.63.

based in the latter for railway construction and maintenance[3004]. As such, railway projects in Ethiopia, Djibouti, Indonesia and Laos constructed through the BRI and financed by China's state banks have facilitated reliance on Chinese companies in these countries[3005].

A 2023 analysis found that paying back these loans drains host countries' tax revenues and foreign currency reserves[3006]. For example, Indonesia was forced to bail out a railway financed by Chinese bank loans twice, and a USD 3,5 billion (~EUR 3,3 billion) loan provided for a railway system in Laos requires approximately 25% of the country's annual output to repay[3007].

20.3.7. OTHER POLICIES

Various other policies relate to railway component localisation and railway construction investment. In 1999, the State Council released the *Implementation Opinions on the Localisation of Urban Rail Transit Equipment* to local governments[3008]. This policy – still in force at the time of writing this Report – requires urban railway projects to use domestically-manufactured railway vehicles and equipment[3009]. Specifically, the average localisation rate of all rail vehicles and equipment must be no less than 70%, regardless of the types of construction funds involved[3010]. The policy also notes that the state may provide financial support (including, for instance, loans with favourable interest rates and financial subsidies) for those urban rail projects that meet the above standard[3011]. China's localisation requirements have reached 75% for metro rolling stock, 50% for metro traction and 60% for metro signalling[3012]. For example, the procurement announcement for the Xuzhou Urban Rail Transit No. 6 Line Phase I Project-Electric Vehicle Traction System requires that the localisation rate shall be no less than 50%[3013].

In 2016, NDRC released the Medium and Long-term Railway Network Plan[3014]. This policy provides central guidance on railway construction from 2016 to 2025 and long-term planning through 2030[3015]. It promotes innovation in investment methods for railway construction[3016]. Specifically, it indicates the Government is to support local governments in establishing railway

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3004 *Ibid*, p.63.

3005 *Ibid*, p.65.

3006 Condon, B., & The Associated Press. (2023, May 18). *'In a lot of the world, the clock has hit midnight': China is calling in loans to dozens of countries from Pakistan to Kenya*. Fortune. https://fortune.com/2023/05/18/china-belt-road-loans-pakistan-sri-lanka-africa-collapse-economic-instability/amp/ (accessed on 22 May 2023).

3007 *Ibid*.

3008 State Council. (1999). *Implementation Opinions on Localization of Urban Rail Transit Equipment*. People's Government of Guangdong Province. http://www.gd.gov.cn/zwgk/gongbao/1999/13/content/post_3359582.html (accessed on 22 May 2023).

3009 *Ibid*.

3010 *Ibid*.

3011 *Ibid*.

3012 ITIF Heading off track 2021, p. 29.

3013 Xuzhou Public Resource Trading Platform. (2022). *Xuzhou Urban Rail Transit No. 6 Line Phase I Project-- Procurement Project of Electric Vehicle Traction System* http://ggzy.zwb.xz.gov.cn/jyxx/003009/003009001/20220616/734f0d85-54ec-4499-9b01-5cc7cc296bcc.html (accessed on 1 August 2023).

3014 National Development and Reform Commission. (2016). *Medium and Long-term Railway Network Planning*. http://www.gov.cn/xinwen/2016-07/20/5093165/files/1ebe946db2aa47248b799a1deed88144.pdf. (accessed on 22 May 2023).

3015 *Ibid*.

3016 *Ibid*.

development funds, issuing government-backed railway construction bonds and raising long-term, low-cost construction funds[3017]. This policy also provides for the state to implement policies to increase investment in the construction of railways in China's emerging Middle and West regions while researching and developing subsidy policies for their operation[3018].

20.4. MARKET INTERVENTIONS

This section examines how the Chinese government intervenes in its internal railway industry through imposing technology transfer policies on foreign companies, providing financial incentives and support to domestic companies – such as grants, preferential tax treatment and preferential loan policies – and creating barriers to foreign company access to public procurement of railway contracts through standardisation and other requirements. Overcapacity issues partly driven by such policies, in turn, help drive China's expansion into the overseas railway market.

20.4.1. STATE SUPPORT MEASURES

20.4.1.1. FOREIGN TECHNOLOGY TRANSFERS

China's intellectual property system favours domestic companies over foreign investors[3019]. From 2018 through 2019, the EU lodged and revised a WTO consultation request regarding China's practice of conditioning foreign investment on transferring technology into China through, for example, requiring foreign companies to share certain technology with domestic partners in joint ventures[3020]. Such practices helped lay the groundwork of China's high-speed railway industry (see also Section 8.2.3.1.3 for a more general context of technology transfers).

After nearly a decade of failed attempts to develop high-speed rail technology, a '*technology transfer for market access*' strategy was promulgated in 2003, permitting foreign firms to sell high-speed rail technology only if they formed joint ventures and shared technology with Chinese companies[3021]. After agreeing to train engineers, provide access to blueprints, and instruct companies on manufacturing processes, Alstom, Kawasaki, and Bombardier were awarded some of the contracts of the initial USD 1,4 billion (~EUR 1,1 billion) procurement package launched in 2004[3022]. Once Chinese companies absorbed and were able to replicate this technology[3023], companies like Alstom were effectively shut out of the high-speed rail

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3017 *Ibid.*

3018 *Ibid.*

3019 Preziosi, N., et al. (2019). *China: Challenges and prospects from an industrial and innovation powerhouse.*, p. 16.

3020 WTO. (2019). *China – Certain measures on the transfer of technology.* https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/549-1R1.pdf&Open=True (accessed on 22 May 2023).

3021 ITIF Heading off track 2021, p. 20.

3022 *Ibid*, p. 20–21.

3023 Huang, Y. (2022). The multiple roles of state-owned enterprises in China's innovation system: A case study of high-speed railways. *China Review*, 22(1), pp. 98-102. https://www.jstor.org/stable/48653980 (accessed on 8 June 2023).

market[3024], and Japanese firms continue to bring IP claims based on allegedly stolen high-speed rail technology[3025].

20.4.1.2. Financial Support and Incentives

Strong internal demand, often driven by public investment, spurred China's railway industry to grow exponentially from 2007 to 2017[3026] (see also Section 20.2.5). China provides its railway industry with a comprehensive suite of financial incentives that includes grants, equity investments, preferential tax treatment, and loans with favourable terms (see also Chapter 6).

20.4.1.3. Grants

China's central and subnational governments provide grants to enterprises in a wide range of advanced manufacturing, strategic emerging, and high-tech industries critical to the country's economic development, including the railway industry. These grants are issued for a variety of purposes, including the transformation and upgrading of industrial enterprises[3027], R&D[3028], transformative science and technology achievements[3029] and intellectual property development[3030].

The National Key R&D Plan focuses on industries that are key to China's national economy[3031] and includes a key special program on advanced rail[3032]. According to one study, the Government subsidised advanced rail transit through the National Key R&D Plan with RMB

3024 ITIF Heading off track 2021, p. 21–22.

3025 *Ibid*, p. 22–23.

3026 Commission 2019 Railway Report, p. 10.

3027 State Council. (2012). *Guiding Opinions of the State Council on Promoting Technology Transformation of Enterprises*, Art. 3(3). http://www.gov.cn/zwgk/2012-09/10/content_2221011.htm (accessed on 22 May 2023).

3028 Shandong Provincial Science and Technology Department, Shandong Provincial Finance Department, & Shandong Provincial Tax Bureau. (2021). *Measures on the Implementation of Financial Subsidies for R&D of Enterprises in Shandong Province*. http://kjt.shandong.gov.cn/art/2021/1/14/art_103585_10285407.html (accessed on 22 May 2023).

3029 Shanghai Science and Technology Commission, Shanghai Finance Bureau, & Shanghai Tax Bureau. (2020). *Measures on the Administration of Shanghai Special Supporting Funds for the Transformation of High-tech Achievements*. https://stcsm.sh.gov.cn/zwgk/kjzc/zcwj/kwzcxwj/20201118/7bd684403e1e417daf900a83fd956b86.html

3030 Guangdong Provincial Government. (2019). *Measures on the Patent Incentives of Guangdong Province*. http://www.gd.gov.cn/zwgk/wjk/qbwj/yfl/content/post_2271960.html (accessed on 22 May 2023).

3031 State Council. (2014). *Notice of the State Council on Deepening the Administration Reform Plan for Central Fiscal Science and Technology Plans (Special Programs, Funds, etc.)*, Art. 3(3). http://www.gov.cn/zhengce/content/2015-01/12/content_9383.htm (accessed on 22 May 2023); see also Ministry of Science and Technology ('MOST'), & Ministry of Finance ('MOF'). (2017). *Notice of the Ministry of Science and Technology and the Ministry of Finance on Issuing the 'Interim Measures for the Administration of National Key R&D Programs'*, Art. 2. https://www.most.gov.cn/xxgk/xinxifenlei/fdzdgknr/fgzc/gfxwj/gfxwj2017/201706/t20170628_133796.html (accessed on 22 May 2023).

3032 MoST and MOF. (2017). *Notice of the Ministry of Science and Technology and the Ministry of Finance on Issuing the 'Interim Measures for the Administration of National Key R&D Programs'*, Art. 2. https://www.most.gov.cn/xxgk/xinxifenlei/fdzdgknr/fgzc/gfxwj/gfxwj2017/201706/t20170628_133796.html (accessed on 22 May 2023).

1.2 billion[3033] (~EUR 163,2 million) in 2016, RMB 480,9 million[3034] (~EUR 63 million) in 2017 and RMB 183,8 million[3035] (~EUR 23,5 million) in 2018. The National Key R&D Plan for the 14th FYP period continues to subsidise the railway industry through the key special program of '*transportation equipment and intelligent transportation technology*'[3036].

The annual reports of the key publicly listed companies in the railway industry discussed in Section 20.2.1 show substantial subsidisation through grants. For example:

- The annual reports of CRRC show that, ever since 2007, it has received substantial government subsidies for '*science and technology programs*', with such subsidies totalling RMB 478,4 billion (~EUR 57,7 billion) in 2022[3037]. CRRC's annual report disclosed RMB 410 million (~EUR 57,9 million) in government subsidies in 2022[3038]. These consisted of subsidies provided through the government's science and technology fund, compensation for demolition projects and returning land, discounted interest on imported products and subsidies for infrastructure development and environmental protection[3039].
- CRSC's 2022 annual report disclosed RMB 361 million (~EUR 51 million) in government subsidies for scientific research and as compensation for demolition projects[3040].
- That same year, CRCC received RMB 136,5 million (~EUR 19,3 million) in annual government subsidies for scientific research, tax, and corporate development and support purposes[3041].
- CREC's 2022 annual report reveals government subsidies of RMB 87,5 million (~EUR 12,4 million)[3042]. The subsidies were used for several specific projects, the Yichun Luming infrastructure investment project and demolition costs for the Hada high-speed

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3033 Kota Academic. (2018, November 18). *2016 list of key special programs under national key R&D plan.* https://www.sciping.com/22798.html (accessed on 22 May 2023).

3034 Kota Academic. (2018, November 17). *2017 list of key special programs under national key R&D plan.* https://www.sciping.com/22487.html (accessed on 22 May 2023).

3035 Kota Academic. (2018, December 6). *2018 list of key special programs under national key R&D plan.* https://www.sciping.com/23261.html (accessed on 22 May 2023).

3036 MoST. (2022). *2022 Project Application Guidelines for the Key Special Program of 'Transportation Equipment and Intelligent Transportation Technology' under the National Key R&D Plan for 14th Five-Year Period.* https://kyc.shzu.edu.cn/_upload/article/files/84/2f/0e0204c04fbfa15ec70dd9f1bc4f/2d8d4f56-b29a-4e6b-8abc-392e821f9a89.pdf (accessed on 22 May 2023).

3037 CRRC. (2023). *2022 annual report of CRRC.* http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=9900005127&stockCode=601766&announcementId=1216271749&announcementTime=2023-03-31 (accessed on 22 May 2023).

3038 CRRC. (2022). *2022 annual report of CRRC.* https://www.crrcgc.cc/Portals/71/Uploads/Files/2023/5-4/638188140477510592.pdf (accessed on 22 May 2023).

3039 *Ibid.*

3040 CRSC. (2022). *2022 annual report of CRSC.* http://www.sse.com.cn/disclosure/listedinfo/announcement/c/new/2023-03-24/688009_20230324_BTU4.pdf (accessed on 22 May 2023).

3041 CRCC. (2022). *2022 annual report of CRCC.* http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2023/2023-3/2023-03-31/8931942.PDF (accessed on 22 May 2023).

3042 CREC. *2022 annual report of CREC.* http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2023/2023-3/2023-03-31/8936032.PDF (accessed on 22 May 2023).

railway[3043]. CREC also received subsidies for science and research and company support[3044].

- While China Railway receives targeted subsidies for a variety of public welfare activities, including transporting students, disabled soldiers, agricultural materials and emergency rescue personnel, as well as funds to supplement operating losses from such public welfare activities[3045], the amount of subsidies is not disclosed.

20.4.1.4. EQUITY INVESTMENT

China Railway Development Fund Co., Ltd. (*'the Rail Fund'*) is a railway investment and financing fund supported by the Government[3046]. The Rail Fund claims to follow market economy rules and attracts private capital investment to expand the sources of capital for railway construction, but mainly invests in railway projects approved by the government[3047]. The Rail Fund is a public-private enterprise in which China Railway acts as the Government's representative, alongside other private shareholders[3048]. China Railway is the largest shareholder with 48.1% of the Rail Fund's shares, and CDB (see Section 6.3.1.3) is the second largest, owning 33.8% of shares[3049]. A mix of state-owned and private insurance companies hold the remaining 18% of shares[3050]. While private investors, as the preferred shareholders of the Rail Fund, have priority in obtaining stable and reasonable investment returns and enjoy voting rights and other rights[3051], the Rail Fund is mainly operated by China Railway as the investment manager for railway construction projects targeted by the Rail Fund[3052].

When the distributable income of the Rail Fund is insufficient to pay the agreed returns to its private investors, China Railway must make up the difference and cannot withdraw its capital, while private investors can withdraw after one year[3053]. Since it was established in September 2014 with registered capital of RMB 367,1 billion (~EUR 44,8 billion), the Rail Fund has participated in or controlled 103 large- and medium-sized railway construction projects representing a total investment of RMB 3,3 trillion (~EUR 435 billion), with China Railway contributing RMB 385.7 billion (~EUR 50,8 billion) of this amount[3054].

3043 *Ibid.*

3044 *Ibid.*

3045 China Business Network. (2020, May 13). *China Railway Group 9 provinces and regions implement two reforms, local take over loss-making feeder railway projects*. Sina Finance. https://baijiahao.baidu.com/s?id=1666568411556945637 (accessed on 22 May 2023).

3046 NDRC, MOF & Ministry of Transportation ('MOT'). (2014). *Administrative Measures on Railway Development Fund*, Art. 2. https://www.nra.gov.cn/jglz/fgzd/gfwj/zt/qt/202104/t20210401_135008.shtml (accessed on 22 May 2023),

3047 NDRC, MOF & MOT. (2014). *Administrative Measures on Railway Development Fund*, Art. 3. https://www.nra.gov.cn/jglz/fgzd/gfwj/zt/qt/202104/t20210401_135008.shtml (accessed on 22 May 2023).

3048 *Ibid*, Art. 4.

3049 Chichacha. *China Railway Development Fund Co., Ltd.* https://www.qcc.com/firm/ce6551497c343c575b0dbe7357db6dac.html (accessed on 1 August 2023).

3050 *Ibid.*

3051 NDRC, MOF and MoT. (2014). *Administrative Measures on Railway Development Fund*, Art. 8. https://www.nra.gov.cn/jglz/fgzd/gfwj/zt/qt/202104/t20210401_135008.shtml (accessed on 22 May 2023).

3052 *Ibid*, Art. 14, 15.

3053 *Ibid*, Art. 20, 22.

3054 China Railway Investment Group. *Introduction of China Railway Development Fund Co., Ltd.* http://www.cric-china.com.cn/gsjs/jjgs_intro/ (accessed on 22 May 2023).

20.4.1.5. LAND SUPPLY

China Railway currently owns abundant land resources, with a large number of stations and marshalling yards concentrated in city centres[3055]. Government policy encourages China Railway to develop the land it owns around the railways and use the income generated by that land to fund railway construction and operation[3056]. Through this policy, China Railway engages in real estate development while offsetting its railway operating losses[3057].

20.4.1.6. PREFERENTIAL TAXATION

EIT (see Section 15.5.2) is the most significant tax imposed on Chinese companies. China has been providing a preferential EIT rate of 15% to HNTEs since 1991[3058], but this preferential treatment was not uniformly provided for by legislation until the promulgation of the Law of the People's Republic of China on Enterprise Income Tax in 2007[3059]. The 15% rate is a substantial reduction of 10% points from China's standard 25% EIT rate for resident enterprises[3060].

HNTEs are resident companies that: (1) are engaged in continuous R&D and application of technological achievements in the fields prescribed in the list of *High- and New-Tech Fields with Key Support of the State*; and (2) have developed core independent intellectual property rights and conducted their business operations on the basis of these intellectual property rights[3061]. Local authorities in China share responsibility for awarding companies HNTE status[3062]. For an HNTE to qualify for the preferential EIT rate[3063]:

(1) the enterprise must obtain ownership of intellectual property rights, which play a core supportive role technologically for the enterprise's main products or services through, for example, independent R&D, transfer, donation, or merger or acquisition;

3055 Lu, Y. (2013, August 21). *Four types of railways liberalize ownership and management rights*. People's Daily Online. http://politics.people.com.cn/n/2013/0821/c1001-22636004.html (accessed on 5 July 2023).

3056 Lu, Y. (2013, August 21). *Four types of railways liberalize ownership and management rights*. People's Daily Online. http://politics.people.com.cn/n/2013/0821/c1001-22636004.html (accessed on 5 July 2023).

3057 *Ibid*.

3058 State Council & State Administration of Taxation. (1991). *Provisions of the Tax Policy for the National High-and-New-Tech Industrial Development Zones*, Art. 4. http://www.chinatorch.gov.cn/gxq/zcfg/199103/06a4d8f9a4c341bba5ecb92dd9bca302.shtml (accessed on 5 July 2023).

3059 National People's Congress. (2017). *Law of the People's Republic of China on Enterprise Income Tax*, Art. 28. http://www.chinatax.gov.cn/chinatax/n810341/n810825/c101434/c28479830/content.html (accessed on 22 May 2023).

3060 *Ibid*, Art. 4.

3061 MOST, MOF & State Administration of Taxation. (2016). *Notice of the Ministry of Science and Technology, the Ministry of Finance, the State Administration of Taxation on Amending and Issuing the Administrative Measures on the Accreditation of High- and New-Tech Enterprises*, Art. 2. http://www.gov.cn/gongbao/content/2016/content_5076985.htm (accessed on 22 May 2023).

3062 OECD. (2023). *Government support in industrial sectors: A synthesis report*. OECD Publishing, pp. 16–17. https://www.oecd-ilibrary.org/docserver/1d28d299-en.pdf?expires=1686161509&id=id&accname=guest&checksum=7D7594B3F5D2971A5E681CADB4B094B3 (accessed on 8 June 2023).

3063 MOST, MOF & State Administration of Taxation. (2016). *Notice of the Ministry of Science and Technology, the Ministry of Finance, the State Administration of Taxation on Amending and Issuing the Administrative Measures on the Accreditation of High- and New-Tech Enterprises*, Art. 11. http://www.gov.cn/gongbao/content/2016/content_5076985.htm (accessed on 22 May 2023).

(2)the technologies playing a core supportive role for the enterprise's main products or services are included in the list of *High-and-New-Tech Fields with Key Support of the State*;

(3)the proportion of scientific and technological personnel engaged in R&D and related technological innovation activities at the enterprise must account for no less than 10% of the total number of employees of the enterprise;

(4)total R&D expenses must account for no less than 3 to 5% of the total business income, depending upon the amount of the company's annual business income;

(5)R&D expenses accrued within the territory of China must account for no less than 60% of total R&D expenses; and

(6)business income generated from high- and new-tech products or services must account for no less than 60% of the total income of the enterprise.

The list of High- and New-Tech Fields with Key Support of the State includes the field of '*advanced manufacturing and automation*' and the sub-field of '*automobile- and rail-vehicle-related technology*'[3064]. Several subsidiaries of CRRC are HNTEs and qualify for the 15% EIT rate[3065]. While the requirements to qualify for the preferential EIT rate for HNTEs do not distinguish between domestic companies and FIEs in China, FIEs may face difficulties in complying with the requirement that at least 60% of R&D expenses be accrued within China[3066].

In addition, R&D expenses incurred by companies in the development of new technologies, products or techniques are subject to a deduction on taxable income[3067].

20.4.1.7. PREFERENTIAL LOANS

Chinese policy banks – including CDB and EXIM (see Section 6.3.1.3.) – have issued several loans to support the development of China's railway industry. From 2011 to 2020, CDB lent RMB 1,2 trillion (~EUR 152,2 billion) to China Railway and its predecessors[3068]. CDB provided loans to the railway sector totalling RMB 236,7 billion (~EUR 28,9 billion) in

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3064 MOST, MOF and State Administration of Taxation. (2016). *High- and New-Tech Fields with Key Support of the State.* (The list of *High- and New-Tech Fields with Key Support of the State* is attached to the *Administrative Measures on the Accreditation of High- and New-Tech Enterprises*). https://www.most.gov.cn/xxgk/xinxifenlei/fdzdgknr/fgzc/gfxwj/gfxwj2016/201602/t20160205_123998.html (accessed on 22 May 2023).

3065 CRRC. (2023). *2022 annual report of CRRC.* http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=9900005127&stockCode=601766&announcementId=1216271749&announcementTime=2023-03-31 (accessed on 22 May 2023).

3066 MOST, MOF & State Administration of Taxation. (2016). *Notice of the Ministry of Science and Technology, the Ministry of Finance, the State Administration of Taxation on Amending and Issuing the Administrative Measures on the Accreditation of High- and New-Tech Enterprises*, Art. 11. http://www.gov.cn/gongbao/content/2016/content_5076985.htm (accessed on 22 May 2023).

3067 *Ibid*; MOF, & State Administration of Taxation. (2021). *Announcement on Further Improving the Policy of Additional Deduction of R&D Expenses before Taxation*. http://www.gov.cn/zhengce/zhengceku/2021-04/07/content_5598193.htm (accessed on 22 May 2023).

3068 China Development Bank. (2021). *China Development Bank has lent more than 2.6 trillion yuan to support the construction of more than 70,000 kilometres of railways*. https://www.cdb.com.cn/xwzx/khdt/202104/t20210412_8373.html (accessed on 8 June 2023).

2014[3069], RMB 121,6 billion (~EUR 17,4 billion) in 2015[3070], RMB 172,5 billion (~EUR 23,5 billion) in 2016[3071] and RMB 147,2 billion (~EUR 19,3 billion) in 2017[3072]. It continued to support the development of the railway industry from 2018 through 2022[3073].

For example, in 2020, CDB issued the Work Plan of China Development Bank on Supporting the High-quality Development of the Manufacturing Industry, which established a special loan of RMB 250 billion (~EUR 31,7 billion) to support key areas defined by national industry policies, which include high-speed rail and rail transit equipment[3074]. In a study of 22 global firms with combined revenues of more than 70% of the global rolling stock market in 2020, the OECD found that these companies received approximately USD 5 billion (~EUR 4,4 billion) from grants, tax concessions, and below-market borrowings from 2016 to 2020[3075]. CRRC alone obtained nearly 60% of all below-market borrowings identified by the OECD[3076].

20.4.1.8. Effects of State Support Measures

While China relied on imports for the initial development of its high-speed rail capabilities, by 2020, the majority of equipment for China's high-speed railways were made by Chinese companies[3077]. A study found that the introduction of high-speed rail technology to China via technology transfers '*leads to a significant growth in patenting activities among firms close to the direct receivers of foreign technologies*' and is '*associated with real economic gains, such as significant growth in total factor productivity and revenue*'[3078].

3069 China Development Bank. (2015). *2014 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2014_jx/ (accessed on 22 May 2023).

3070 China Development Bank. (2016). *2015 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2015_jx/ (accessed on 22 May 2023).

3071 China Development Bank. (2017). *2016 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2016_jx/ (accessed on 22 May 2023).

3072 China Development Bank. (2018). *2017 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2017_jx/ (accessed on 22 May 2023).

3073 China Development Bank. (2019). *2018 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2018_jx/ (accessed on 22 May 2023); China Development Bank. (2020). *2019 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2019_jx/ (accessed on 22 May 2023); China Development Bank. (2021). *2020 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2020_jx/ (accessed on 22 May 2023); China Development Bank. (2022). *2021 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2021_jx/ (accessed on 22 May 2023); China Development Bank. (2023). *2022 annual report of China Development Bank*. https://www.cdb.com.cn/gykh/ndbg_jx/2022_jx/ (accessed on 22 May 2023).

3074 People's Daily Overseas Edition. (2020, March 30). *China Development Bank's special loan to support the manufacturing industry*. http://paper.people.com.cn/rmrbhwb/html/2020-03/30/content_1978848.htm (accessed on 22 May 2023).

3075 OECD. (2023). *Government support in industrial sectors: A synthesis report*. OECD Publishing, p. 40. https://www.oecd-ilibrary.org/docserver/1d28d299-en.pdf?expires=1686161509&id=id&accname=guest&checksum=7D7594B3F5D2971A5E681CADB4B094B3 (accessed on 8 June 2023).

3076 *Ibid*.

3077 UBS. (2020). *Global Railway: Lessons from the world's most profitable HSRs*, p. 29.

3078 Lin, Y., Qin, Y., & Xie, Z. (2021). Does foreign technology transfer spur domestic innovation? Evidence from the high-speed rail sector in China. *Journal of Comparative Economics, 49*, 213. https://doi.org/10.1016/j.jce.2020.08.004 (accessed on 22 May 2023).

The government has provided financial support to Chinese firms to not only build and operate its high-speed rail network but manufacture the equipment supporting these projects[3079]. The Commission estimated in 2019 that CRRC was receiving EUR 450 million per year in subsidies[3080], and according to an analysis by the Information Technology and Innovation Foundation ('ITIF'), from 2015 to 2021, CRRC received almost USD 800 million (~EUR 702,5 million) in direct government subsidies[3081]. The ITIF also estimates that CRRC's state-supported debt increased from USD 70 billion (~EUR 56,3 billion) in 2005 to over USD 558 billion (~EUR 493,9 billion) in 2017[3082].

These and other measures create economies of scale for China's SOEs that further reduce the ability of other companies to compete. According to the ITIF, '*CRRC is not only larger than its competitors, but also has the broadest capabilities in the rail market*'[3083]. While CRRC enjoys 70% of the global rolling stock market, the ITIF analysis estimates that CRRC's market share would be 15 to 40% of this market in the absence of these measures[3084].

Through direct subsidies, government grants, tax benefits and export credits, China continues to subsidise its industries of strategic importance, including its SOEs[3085]. Firms involved in advanced rail technology receive subsidies and tax incentives to support R&D, enjoy income tax rate reductions and qualify for more tax deductions[3086].

20.4.2. PUBLIC PROCUREMENT PRACTICES

Opaque and discriminatory procurement procedures hinder foreign firms' access to China's massive domestic rail market[3087] (see also Section 7.1.2).

20.4.3. RESTRICTIONS ON FOREIGN COMPANY ACCESS TO PUBLIC PROCUREMENT

China's WTO membership imposes certain obligations with respect to non-discrimination despite China's attestations that the procurement activities of its SOEs are commercial in nature and thus fall outside of this requirement[3088]. Nevertheless, China controls a heavily restricted procurement market that, along with its control of SOEs, funnels work to Chinese companies[3089].

3079 ITIF Heading off track 2021, p. 5.

3080 Commission 2019 Railway Report, p. 156.

3081 ITIF Heading off track 2021, p. 24. Furthermore, this estimate '*likely represents an incomplete picture of direct government support, as company financial documents also acknowledge government subsidy contributions to "non-operating income," "other receivables," and "other cash received relevant to business activities.*"'

3082 *Ibid*, p. 23.

3083 *Ibid*, p. 14–15.

3084 *Ibid*, p. 52.

3085 Smith, J. et al. (2020). *Charting a transatlantic course to address China*. Center for a New American Security, p. 25.

3086 ITIF Heading off track 2021, p. 23.

3087 Commission 2019 Railway Report, p. 156.

3088 General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A: General Agreement on Tariffs and Trade 1994, Article III 1867 U.N.T.S. 187. ('GATT'); available at: https://www.wto.org/english/docs_e/legal_e/04-wto.pdf (accessed on 8 June 2023).

3089 ITIF Heading off track 2021, pp. 24–25.

China's railway industry reflects the discriminatory nature and distortionary effects of the country's public procurement practices. According to the ITIF, to compete for public procurement contracts, foreign firms must get licenses by setting up joint ventures with Chinese companies, yet some tenders prohibit such joint ventures from bidding[3090]. Similarly, firms with local IP are granted more points under procurement criteria[3091].

In 2022, China Railway launched four tenders for the supply of 87 high-speed trains[3092]. None of these bids were won by foreign companies, and only one of these bids was won by an FIE: Alstom Sifang (Qingdao) Transportation Ltd., a joint venture between Alstom and a subsidiary of CRRC[3093]. In some cases, CRRC started production before the tender was issued and had trains ready for delivery by the time the contract was signed[3094]. In a survey across industries, companies cited myriad licensing requirements and challenges as creating barriers to access to the Chinese market, including IP disclosures, inconsistent interpretation of regulations between central and local regulators, lengthy and indeterminate approval timelines, and de facto licensing restrictions on the number of players permitted in a particular industry[3095].

The implementation of Made in China 2025 and related policy initiatives may further reduce market access for foreign firms operating in China, as such firms receive unequal treatment relative to the treatment of Chinese companies by other governments[3096]. According to the Commission's Joint Research Centre ('*JRC*'), from 2015 to 2018, about 30% of all European deals in China related to sectors covered by Made in China 2025, and one of them was related to advanced rail equipment[3097]. While China operated at a trade deficit in rail vehicles from 2008 to 2010, from 2014 to 2016 it operated at a significant trade surplus[3098]. Around the same time, European investors began favouring joint ventures and investing in minority stakes of Chinese companies because of the discriminatory policy and regulatory environment's favouring of Chinese firms[3099]. UNIFE assesses that the '*accessibility rate*' of foreign investors to the Chinese rail market fell from an already-low rate of 20% in 2013-2015[3100] to 17% in 2020[3101].

3090 *Ibid*, pp. 25–26.

3091 *Ibid*, p. 26.

3092 Bingyang, L. (2022, December 9). *The largest scale of bidding for high-speed locomotives is initiated with an amount of 5.2 billion yuan and the purchase of equipment is still low.* Tencent News. https://new.qq.com/rain/a/20221209A0A8GZ00 (accessed on 8 June 2023).

3093 National Railway Procurement Platform. (2022). *Announcement on winning the bid for the procurement project of Fuxing EMU (8 trains) with a speed of 350 kilometers per hour.* https://cg.95306.cn/baseinfor/notice/informationShow?id=142863acf0ab2acdce582fba627529f9 (accessed on 8 June 2023).

3094 ITIF Heading off track 2021, p. 25.

3095 U.S. Chamber of Commerce. (2017). *Made in China 2025: Global ambitions built on local protections*, p. 27.

3096 Preziosi, N., et al. (2019). *China: Challenges and prospects from an industrial and innovation powerhouse.*, p. 16.

3097 *Ibid*, p. 50-51.

3098 *Ibid*, p. 29.

3099 *Ibid*, p. 50.

3100 See UNIFE. (2016). *Annual report 2016.* https://www.unife.org/wp-content/uploads/2021/03/ANNUAL-REPORT-2016-13MB.pdf (accessed on 8 June 2023).

3101 European Rail Supply Industry. (2021). *Annual report 2021.* https://www.unife.org/wp-content/uploads/2022/03/UNIFE-AR2021_Updated-HQspreads-07022022.pdf (accessed on 8 June 2023).

While CRRC enjoys the largest share of the global high-speed rail market mainly due to its outsized presence in the Chinese market, other major companies like Alstom, Hitachi, Kawasaki, and Siemens have seen their relative and absolute market shares decrease due to their inability to access the Chinese market[3102]. According to ITIF, as EU imports of rail products from China more than doubled from EUR 101 million in 2011 to EUR 212 million in 2017, EU exports of locomotives to China fell from EUR 865 million to EUR 505 million over this same time period[3103].

20.4.4. STANDARDISATION

Technical standards consist of common product specifications that include basic safety and interoperability requirements for common use[3104]. In contrast to Europe and the US, China's standardization approach is state-driven, as even ostensibly private standards-developing organisations rely on state funding and state-support[3105]. The economies of scale resulting from the Chinese governmental interventions in its domestic rail market allow for greater standardisation of the production process[3106]. This not only helps increase production, but also gives Chinese companies a leg up in winning contracts with China Railway, which tends to include similar requirements in each contract[3107].

China's activities in international standards-setting bodies also impact its domestic market. The 14th Five Years Development Plan for Railway Standardisation's goal of translating more than 95% of international railway standards into Chinese standards by 2025[3108] exceeds the general national target of 85% alignment[3109]. This is of concern, as China has been accused of pushing its own domestic standards through international bodies, and then requiring that all companies in its domestic market use international standards as a means to '*cover up unfair domestic protectionism*'[3110].

20.4.5. OVERCAPACITY

Overseas expansion of the high-speed railway segment has helped reduce domestic overcapacity[3111]. During their rapid expansion, both CRRC and CRCC have faced overcapacity

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3102 ITIF Heading off track 2021, p. 11.

3103 *Ibid*, p. 13.

3104 Rühlig, T.N., & ten Brink, T. (2021). The externalization of China technical standardization approach. *Development and Change, 52*(5), p.1198. https://doi.org/10.1111/dech.12685 (accessed on 22 May 2023).

3105 *Ibid*, p.1205–1206.

3106 Kratz, A., & Oertel, J. (2021). *Home advantage: How China's protected market threatens Europe's economic power*. European Council on Foreign Relations, p. 31.

3107 *Ibid*.

3108 National Railway Administration. (2021). *14th Five-Year Development Plan for Railway Standardization*. https://www.nra.gov.cn/jglz/kjgl/zywj/202112/t20211227_272220.shtml (accessed on 22 May 2023).

3109 Sheehan, M.; Feldgoise, J. (2023, February 27). *What Washington gets wrong about China and technical standards*. https://carnegieendowment.org/2023/02/27/what-washington-gets-wrong-about-china-and-technical-standards-pub-89110.

3110 *Ibid*.

3111 Xiaoxi, C. (2014, December 26). *Japanese media: The domestic over-capacity issue, China urges companies to 'go outside'*. China Daily. http://caijing.chinadaily.com.cn/2014-12/26/content_19173902_3.htm (accessed on 22 May 2023); People's Daily Online. (2015, March 6). *Renmin Net: Facilitate the mass export of China high-speed railway - An interview with the representative of the National People's Congress and visit of China Railway No. 4 Engineering Group*. China Railway

issues[3112]. Even when the high-speed railway segment itself is not experiencing overcapacity issues[3113], China uses this industry to resolve overcapacity in other industries such as iron and cement manufacturing[3114].

China has identified the need to curb overcapacity and has taken steps in recent years to attempt to mitigate this issue. In 2018, NDRC released a circular providing guidance on strengthening the regulation of investments in urban railway transportation and preventing overcapacity[3115]. Specifically, the circular requires local governments to report their local industries' manufacturing capacities for urban railway locomotives, traction systems, braking systems, and signalling systems to NDRC in order to establish monitoring mechanisms and strengthen guidance to prevent overcapacity[3116]. Furthermore, the circular directs provincial-level NDRCs to strictly regulate investment in urban railway locomotives, prohibiting regions that utilise less than 80% of such products manufactured from increasing manufacturing, and requiring companies that apply for expansion projects to demonstrate an 80% utilisation rate during the prior two years[3117].

A 2018 State Council opinion concluded that several cities had too many urban rail construction projects, thereby imposing financial burdens on local governments[3118].

No. 4 Engineering Group Co., Ltd. http://www.crec4.com/content-1933-19017-1.html (accessed on 22 May 2023).

3112 Lu, B. (2013, March 31). *The issue of 'investment in exchange for order' re-emerge, how to resolve the over-capacity issue of subway cars manufacturing*. China Business News. https://finance.sina.com.cn/jjxw/2023-03-31/doc-imynuhca4432578.shtml; China Economics Net. (2017, May 22). *CRRC has trouble in over-capacity, the overseas business is not growing continuously*. http://finance.china.com.cn/industry/20170522/4220928.shtml (accessed on 22 May 2023); Zhou, C., & Zhang, Z. (2018, April 9). *The director of CRRC: The risks of the over-capacity of urban railway is still controllable*. Daily Economics News. http://ifinance.ifeng.com/16062773/news.shtml?&back (accessed on 22 May 2023); China Business News. (2020, August 14). *How to resolve the over-capacity of manufacturing railway transportation equipment - An interview with Ning Sun, the General Manager of the Railway Business Department of TUV Rheinland China*. Rail+ Metro. http://www.railmetrochina.com/expo/%E8%BD%A8%E9%81%93%E4%BA%A4%E9%80%9A%E8%A3%85%E5%A4%87%E5%88%B6%E9%80%A0%E4%BA%A7%E8%83%BD%E8%BF%87%E5%89%A9%E5%A6%82%E4%BD%95%E5%8C%96%E8%A7%A3%EF%BC%9F-%E4%B8%93%E8%AE%BF%E5%BE%B7.html (accessed on 22 May 2023).

3113 Zeng, H. (2014, July 3). *Yuanzheng Cao: The over-capacity issue is serious but not for high-speed railways*. China News. https://www.chinanews.com.cn/cj/2014/07-03/6345403.shtml (accessed on 22 May 2023).

3114 Yu, X. (2013, July 23). *The State hopes to resolve the over-capacity issue by developing the railway industry - improve the investment in high-speed railway*. Shanghai Securities News. https://news.cnstock.com/industry,tt-201307-2667884.htm (accessed on 22 May 2023).

3115 NDRC. (2018). *Circular On Relevant Matters on Strengthening the Supervision of Investment Projects of Urban Railway Transportation Cars released by the National Development and Reform Commission*. http://www.gov.cn/zhengce/zhengceku/2018-12/31/content_5434899.htm (accessed on 22 May 2023).

3116 *Ibid*.

3117 *Ibid*.

3118 State Council. (2018). *Opinion on Further Strengthening the Management of Urban Railway Transportation Planning Construction*. http://www.gov.cn/zhengce/content/2018-07/13/content_5306202.htm (accessed on 22 May 2023).

In 2022, Beijing's Fengtai District released a circular regarding the development of rail transportation for the 14th FYP period that mentions overcapacity in the manufacture of urban railway transportation cars and associated raw materials[3119].

The Government also ordered CRRC to halt development of maglev production plants "*as part of broader orders to stop local governments from building excessive local transit projects that drive up debt and create overcapacity in industrial production*"[3120]. One such factory was expected to produce 60 maglev trains a year, far more than the global market could support[3121].

According to a special report published by the National Bureau of Asian Research, the BRI not only serves geopolitical interests but "*other contingent, commercial goals, particularly in offshoring surplus investment at home to other geographies* [...] *to resolve latent issues of overcapacity and debt issues through the export of capital and capacity*"[3122]. After China injected "*huge sums of capital at home*" in the wake of the 2008 global financial crisis, SOEs facing a saturated domestic market were encouraged to search for other markets with the help and support of state-owned banks, leading to increased railway construction abroad, especially in developing countries[3123]. From 2013 to 2019, CRCC signed 21 rail construction contracts abroad worth USD 19,3 billion (~EUR 15,3 billion), while CREC signed 19 contracts worth USD 12,9 billion (~EUR 10,9 billion)[3124].

20.5. CHAPTER SUMMARY

China has supported the development of its railway industry, and especially high-speed rail and its components, through a variety of plans, policies and strategies issued by the country's central and local governments. Government policy facilitated the transfer of high-speed rail technology from foreign to Chinese companies while this industry was still nascent in China. In the nearly 20 years since then, China has provided financial support via grants, equity investments, and preferential tax and loan treatment to its essentially state-owned railway industry while shielding domestic companies from international competitors.

Reforming how the industry is structured and regulated has been instrumental in China's development of the sector. The 2015 forced merger of CNR and CSR to form CRRC created a national and, increasingly, global champion in rolling stock manufacturing. In 2013, and again in 2017, China reorganised the supervision of its railway industry to separate regulatory and

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3119 People's Government of Fengtai District Beijing City. (2022). *The Development Plan of the Railway Transportation Industry of Fengtai District during the Fourteenth Five-year Period.* http://www.bjft.gov.cn/ftq/zfwj/202202/b87a2bb0c28e4aceaa30cae1b350cf9a.shtml (accessed on 22 May 2023).

3120 Lichao, S., & Cao, B. (2018, May 24). *Maglev train production line suspended amid overcapacity concern.* Caixin Global. https://www.caixinglobal.com/2018-05-24/maglev-train-production-line-suspended-amid-overcapacity-concern-101255179.html (accessed on 22 May 2023).

3121 *Ibid.*

3122 Chen, Y. (2022). *African Railway ambitions meet China's Belt and Road.* National Bureau of Asian Research, p. 37. https://www.nbr.org/wp-content/uploads/pdfs/publications/sr98_inroadsandoutposts_may2022.pdf (accessed on 8 June 2023).

3123 *Ibid.*

3124 China Power. (2021). *How are foreign rail construction projects advancing China's interests?* https://chinapower.csis.org/rail-construction/ (accessed on 22 May 2023).

inspection duties from operations and to allow China Railway to operate as a modern enterprise. Since then, China Railway has invested in railway infrastructure development, including through its role as government representative of the China Railway Development Fund Co., Ltd.

China Railway also plays a role in government procurement, launching tenders for railway component purchases for the country's rail projects that are inaccessible to foreign companies, and even foreign-Chinese joint ventures have seen their access to public tenders diminish.

The totality of China's interventions in its domestic market have sheltered China's railway SOEs from foreign competition at home and enabled them to significantly undercut their European, Japanese, and US competitors abroad. At the same time, China's projects through the BRI and other initiatives helped push Chinese overcapacity overseas, sometimes through financing arrangements that contributed further indirect distortions on the Chinese domestic market.

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21.1. INTRODUCTION

Environmental goods and services are those that aim "to prevent, measure, control, limit, minimise or correct environmental damage and resources depletion"[3125]. Environmental goods can be defined as the outputs of environmental activities, i.e. activities that either directly serve an environmental purpose or produce specifically designed products whose use serve an environmental purpose. Thus environmental goods are all goods that directly serve environmental protection (all activities and actions which have as their main purpose the prevention, reduction and elimination of pollution and of any other degradation of the environment) or resource management (activities that include the preservation, maintenance and enhancement of the stock of natural resources and therefore the safeguarding of those resources against depletion) or are specifically designed goods whose use serves for environmental protection or resource management[3126]. As such, they encompass a wide array of components, products, sectors and industries, and developing an internationally agreed upon definition of what falls within or outside the definition of 'environmental goods' has proven difficult[3127]. Nevertheless, goods that undisputedly fall within the definition are products and components principally focused on the clean energy transition, such as goods used in the renewable energy sector. Accordingly, this chapter will focus on the environmental goods used in the renewable energy generation sector, specifically goods used to produce solar energy, wind energy and geothermal energy – in particular, solar cells, wind turbines and geothermal (or 'ground source') heat pumps ('*GHP*'), respectively.

China has explicitly identified the production of environmental goods as important to its economic development objectives. In 2010, the State Council adopted the *Decision of the State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries*, designating certain industries as SEIs that warranted special policy and fiscal attention[3128]. One such industry was the 'new energy industry', which includes both the PV and wind power industries[3129]. Accordingly, manufacturers of products in the new energy industry have been eligible to receive various kinds of state support.

3125 Eurostat 2009, *The environmental goods and services sector*, p. 19; available at: https://ec.europa.eu/eurostat/documents/3859598/5910217/KS-RA-09-012-EN.PDF.pdf/01d1733e-46b6-4da8-92e6-766a65d7fd60?t=1414781549000 (accessed on 11 October 2023).

3126 Eurostat 2016, Environmental goods and services sector accounts, Handbook, p. 12; available at: https://ec.europa.eu/eurostat/documents/3859598/7700432/KS-GQ-16-008-EN-N.pdf/f4965221-2ef0-4926-b3de-28eb4a5faf47?t=1476868680000 (accessed on 11 October 2023).

3127 See Reinsch, W.A., Benson, E. and Puga, C., *Environmental Goods Agreement: A New Frontier or an Old Stalemate?*, 28 October 2021; available at: https://www.csis.org/analysis/environmental-goods-agreement-new-frontier-or-old-stalemate (accessed on 24 August 2023).

3128 Decision of the State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries, 2010; available at: http://www.gov.cn/zwgk/2010-10/18/content_1724848.htm (accessed on 24 August 2023); *China's Strategic Emerging Industries: Policy, Implementation, Challenges, & Recommendations*, US-China Business Council, 2013; available at: https://www.uschina.org/sites/default/files/sei-report.pdf (accessed on 24 August 2023).

3129 *Ibid.*

Now China is responsible for 60% of global wind turbine manufacturing capacity[3130], over 80% of solar cell manufacturing[3131] and almost 40% of heat pump manufacturing[3132]. These positions are primarily the result of prior Chinese government interventions that have left the global market in these sectors dominated by Chinese firms[3133].

21.2. Regulatory and Policy Framework

21.2.1. 14th Five Years Plan for National Economic and Social Development

In 2016, China promulgated the 13th FYP (see Section 2.2.5), which included the goal of establishing a modern energy system[3134]. The 13th FYP included ambitions around wind and solar power generation and accelerating the development of geothermal energy[3135].

The 14th FYP – the current centrepiece of China's industry policy and planning system (see more in Section 2.2.5) – builds upon the 13th FYP in its emphasis on a modern energy system, calling for the promotion of an energy revolution and for building a clean, low carbon, safe and efficient energy system[3136]. The 14th FYP further focuses on expanding the scale of wind and solar power generation, developing offshore wind power and developing and utilising geothermal energy, where permitted by local conditions[3137]. The plan designates energy storage as a cutting-edge sector for which research through 'national future industrial technology research institutes' will be conducted[3138]. The plan also proposes the accelerated development of pumped storage power stations and the large-scale implementation of new energy storage technologies[3139].

21.2.2. Made in China 2025

3130 *Energy Technology Perspectives 2023*, International Energy Agency, 2023, p. 115, available at: https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 24 August 2023).

3131 *Solar Photovoltaics: Supply Chain Deep Dive Assessment*, US Department of Energy Response to Executive Order 14017, "America's Supply Chains", US Department of Energy, 24 February 2022, p. 37; available at: https://www.energy.gov/sites/default/files/2022-02/Solar%20Energy%20Supply%20Chain%20Report%20-%20Final.pdf (accessed on 24 August 2023).

3132 *Energy Technology Perspectives 2023*, International Energy Agency, 2023, pp. 98–99; available at: https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 13 April 2023).

3133 However, China may provide additional government support to meet ambitions it has set for itself or to overcome economic challenges. See *China to step up financial support for wind and solar power*, Reuters, 25 March 2021; available at: https://www.reuters.com/business/energy/china-step-up-financial-support-wind-solar-power-2021-03-25/ (accessed on 30 August 2023).

3134 See Chapter 30, Section 1 of the Outline of the 13th FYP for National Economic and Social Development, National People's Congress,2016; available at: http://www.gov.cn/xinwen/2016-03/17/content_5054992.htm (accessed on 24 August 2023).

3135 *Ibid.*

3136 See Chapter 11, Section 3 of the 14th FYP for National Economic and Social Development and Long-range Objectives for 2035 of the PRC, National People's Congress, 2021; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 24 August 2023).

3137 *Ibid.*, Chapter 11, Section 3.

3138 *Ibid.*, Chapter 9, Section 2.

3139 *Ibid.*, Chapter 11, Section 3.

Made in China 2025 (see Section 4.2.3) addresses also 'green development', describing the need to popularise and apply technologies, processes and equipment for energy conservation and environmental protection[3140]. Made in China 2025 selects 10 key industries for achieving breakthroughs and for which global leadership or advanced technological development is sought by 2025[3141]. One such key industry is electrical equipment, under which Made in China 2025 calls for the development of renewable energy equipment and advanced energy storage devices[3142].

The Made in China 2025 Roadmap (see Section 4.2.3) includes as key products renewable energy power generation equipment and intelligent control systems, such as the 5 *MW*-class wind turbine and advanced solar power generation equipment, including large-scale photothermic power generation. The Made in China 2025 Roadmap also lists ultra-long blades and intelligent control systems of large wind turbines as key parts and components, and lists wind turbine blade design technology for 5 MW and greater, wind turbine intelligent control systems, 10 MW-class superconducting wind turbine technology and overall structure design, efficient solar energy heat collection, heat storage and exchange systems and equipment, intelligent control technology and system integration as key technologies for China to develop[3143]. The Made in China 2025 Roadmap authorises the use of the full suite of taxation and fiscal policy tools and administrative processes to support technological progress and industrialisation of clean and efficient power generation equipment, and to build a major national innovation base for clean and efficient power generation technology[3144].

Furthermore, China promulgated the Industrial Four Bases Catalogue in 2016[3145]. For the 10 fields identified by Made in China 2025, the catalogue explained that industrial and manufacturing capacity should be promoted in (1) '*core basic components*', (2) '*key basic materials*', (3) '*advanced basic technology*' and (4) the '*industrial technology base*'. Included within the catalogue are various environmental goods in the new energy sector, such as large-scale composite wind power blades and composite pole towers, anode and cathode materials of water-based batteries for wind- and solar-scale energy storage, ultra-efficient III-V crystal solar cells and thin-film gallium arsenide solar cells[3146]. The catalogue was published in part to "*guide financial institutions, credit guarantee industries and insurance industries to make full use of various financial means to support research and development*"[3147].

21.2.3. Plans on Renewable Energy Development

3140 See Article 2, Section 1 of the *Made in China 2025,* State Council, 2015; available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 24 August 2023).

3141 *Made in China 2025 Key Technology Roadmap. Preface*, National Manufacturing Strategy Advisory Committee, 2015; available at: http://www.cm2025.org/uploadfile/2016/0321/20160321015412313.pdf (accessed on 11 October 2023).

3142 See Article 3, Section 6, Item 7 of the *Made in China 2025,* State Council, 2015; available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed on 24 August 2023).

3143 *Ibid.*, Article 7.1.3.1 (5). Items 1 and 2, Article 7.1.3.2 (4), Article 7.1.3.3(5).

3144 *Ibid.,* Article 7.1.5.2.

3145 *Industrial Four Bases Catalogue*, National Manufacturing Strategy Advisory Committee, 2016; available at: http://www.cm2025.org/show-14-126-1.html (accessed on 28 July 2023).

3146 *Ibid.*, Sections 2(4)11–12, 6(2)30, 9(2)17–18.

3147 *Ibid.*, Foreword.

21.2.3.1. 13TH FIVE YEARS PLANS

The 13th Five Years Plan for Renewable Energy Development focused directly on the development and efficient utilisation of various forms of renewable energy, including wind power, solar energy and geothermal energy, and it included as one of the main development targets the application of energy storage technologies in the renewable energy sector[3148]. It also aimed to accelerate technological innovation related to renewable energy, including by improving technology for product preparation, production processes and the localisation of production equipment for the entire supply chain, while also advancing R&D of key technologies[3149].

The 13th Five Years Plan for Solar Energy Development included goals related to the solar cell industry, such as improving the conversion efficiency of advanced crystalline silicon PV cells to more than 23%, improving the conversion efficiency of thin-film PV cells and the industrial development of several new types of PV cells[3150]. The plan "[e]*ncourage*[d] *financial regulators and financial institutions to implement green credit policies that promote the development of clean energy*" and "*actively promote*[d] *cooperation between banks and other financial institutions and local governments to establish investment and financing service platforms for photovoltaic power generation projects*"[3151]. Moreover, the plan suggested that state funding, enterprise investment and social capital participation could be used to establish a national photovoltaic industry investment fund to provide funds for innovative businesses.[3152]

In the 13th Five Years Plan for Wind Energy Development, China called for increased performance of wind turbines, achieving breakthroughs in the design and manufacturing of large-capacity (10 MW) wind turbines and key components, and mastering other technologies related to wind turbines, such as intelligent diagnosis and cooperative control technology[3153]. The plan also authorised developing and amending standards related to wind turbines. The plan "[e]*ncourage*[d] *financial institutions to issue green bonds, encourage*[d] *policy banks to increase support for the wind power industry by means of lower interest rates, and encourage*[d] *commercial banks to promote project financing models*"[3154]. The plan also aimed to support offshore wind industrial policy by, in part, "*improv*[ing] *offshore wind power development plans in coastal provinces*" and "*encourag*[ing] *coastal provinces (autonomous regions, municipalities) and major development companies to build offshore wind power demonstration projects*"[3155].

3148 See Chapter 4, Sections 2, 3, 5 and 7of the *13th Five-Year Plan for the Development of Renewable Energy*, NDRC, 2016; available at: http://www.nea.gov.cn/135916140_14821175123931n.pdf (accessed on 11 October 2023).

3149 *Ibid.*, Chapter 7, Section 2.

3150 See Section 2.3.3 of the *13th Five-Year Plan for Solar Energy Development*, NEA, 2016; available at: http://zfxxgk.nea.gov.cn/auto87/201612/t20161216_2358.htm?keywords= (accessed on 24 August 2023).

3151 *Ibid.*, Section 4.5.

3152 *Ibid.*

3153 See Section 4.3 of the *13th Five-Year Plan for Wind Energy Development*, NEA, 2016; available at: https://www.gov.cn/xinwen/2016-11/30/5140637/files/2bf9f0e12d00443fb99aea2753a5de5a.pdf (accessed on 11 October 2023).

3154 *Ibid.*, Section 4.3.

3155 *Ibid.*, Section 4.4.

The 13th Five Years Plan for Geothermal Energy Development was the first national-level plan focused on the geothermal industry[3156]. The plan highlighted the increasingly important role of the geothermal energy industry for the clean energy transition, and it established the goal of achieving breakthroughs in heat pump technology[3157]. The plan promoted the development of investment support policies, the provision of policy support in the form of land and sea use provisions and electricity price support and increased investment in R&D[3158].

Independent analyses of China's renewable energy commitments during the 13th FYP period indicate that China has seen success in achieving its ambitions, at least at a high level. By 2020 – the end of the 13th FYP period – China had 530 GW of installed solar and wind capacity, vastly exceeding the goal of 320 GW[3159]. Moreover, China surpassed its target for the non-fossil fuel share of energy consumption, reaching 16% by 2020, slightly ahead of the goal of 15%[3160].

21.2.3.2. 14TH FIVE YEARS PLAN ON RENEWABLE ENERGY DEVELOPMENT

The 14th Five Years Plan on Renewable Energy Development describes the support that the government will provide to promote the development of renewable energy, such as land and sea use planning to develop and utilise renewable energy; increasing the collection of renewable energy development funds; improving support policies for renewable energy such as deep-sea wind power, biomass energy and geothermal energy; incorporating the financing of renewable energy projects into local governments' incentive plans, such as through low-interest rate financing; and establishing a financial support mechanism to support distributed renewable energy[3161].

The 14th Five Years Plan on Renewable Energy Development is predicated upon the expectation that global energy consumption will transition to a low- or zero-carbon future, and as such, renewable energy will gradually become the main energy source for supporting economic and social development[3162]. Accordingly, during the period covered by the 14th FYP, China's renewable energy sectors should enter a new stage of 'high-quality leapfrog development'[3163].

3156 *The 13th FYP for Geothermal Energy Development May Activate a High-value Industry*, China Energy News, 28 August 2017; available at: https://paper.people.com.cn/zgnyb/html/2017-08/28/content_1800973.htm (accessed on 14 April 2023).

3157 See Sections 3.5 and 5.1.5 of the *13th Five-Year Plan for Geothermal Energy Development*, NDRC, NEA, and Ministry of Land and Resources, 2017; available at: http://www.gov.cn/xinwen/2017-02/06/5165321/files/19f10bae3ba5463f833c954de2d06a8f.pdf (accessed on 24 August 2023).

3158 *Ibid.*, Section 5.1.

3159 Min, H., *Guest post: Will China's new renewable energy plan lead to an early emissions peak?*, Carbon Brief, 7 July 2022; available at: https://www.carbonbrief.org/guest-post-will-chinas-new-renewable-energy-plan-lead-to-an-early-emissions-peak/ (accessed on 24 August 2023).

3160 *Ibid.*

3161 *14th Five-Year Plan on Renewable Energy Development,* Articles 8.2–8.4, NDRC, NEA, Ministry of Finance, the Ministry of Natural Resources, Ministry of Ecology and the Environment, Ministry of Housing and Urban-Rural Development, Ministry of Agriculture and Rural Affairs, China Meteorological Administration, State Forestry and Grassland Administration, 2022; available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202206/P020220602315308557623.pdf (accessed on 24 August 2023).

3162 *Ibid.*, Article 1.2.

3163 *Ibid.*, Article 1.2.

By the end of 2030, China's goal is that the total installed capacity for wind and solar power will exceed 1.2 billion KW[3164].

The 14th Five Years Plan on Renewable Energy Development ('14th Renewable Energy FYP') addresses multiple areas of development for the renewable energy sector. It promotes the development of solar cell technologies[3165], improvements to wind turbine technology, upgrades to existing wind turbines and an emphasis on the R&D of large offshore wind turbines and high-altitude and high-power wind turbines, as well as achieving breakthroughs in large-capacity wind turbines[3166], as well as calls for the active utilisation of GHPs for heating and cooling services[3167].

In regions with ample wind and solar energy sources and with the conditions necessary for sustainable large-scale development, China aims to improve the capacity of local renewable energy consumption and transmission. China focuses on building new energy generation sites in XUAR, the upper reaches of the Yellow River, the Hexi Corridor, the Yellow River Jiziwan, northern Hebei Province, the Songliao region and the lower reaches of the Yellow River. Moreover, the 14th Renewable Energy FYP sets the goal of building five offshore wind power bases in the Shandong Peninsula, the Yangtze River Delta, southern Fujian, eastern Guangdong and the Beibu Gulf[3168].

In addition to emphasising the development of wind and solar power generation bases, the 14th Renewable Energy FYP also promotes the deployment of distributed wind and solar energy – i.e., smaller-scale wind and solar generation sites located near where the energy will be consumed[3169] – in industrial parks, economic development zones and oil, gas and mining and their surrounding areas. The plan also focuses on the promotion and application of low-wind speed wind power technology, the promotion of local and nearby development of wind power in central, southeast and eastern China according to local conditions and the development of wind power capacity in rural areas. With solar generation, the plan references a focus on promoting the development and utilisation of rooftop solar panels in industrial parks, economic development zones and public buildings; the development of building-integrated PV power generation in new factories and public buildings and the implementation of the comprehensive utilisation of 'Photovoltaic +' such as through integrating the development of solar power generation with information technology industries, including 5G base stations and big data centres, and the application of solar power in new energy vehicle charging, facilities along railway lines, expressway service areas and other transportation fields[3170].

3164 *Ibid.*, Article 2.3.

3165 *Ibid.*

3166 *Ibid.*, Sections 3.1–3.2, 5.1.

3167 *Ibid.*, Sections 3.6.

3168 *Ibid.*, Article 3.1.

3169 *Unlocking the Potential of Distributed Energy Resources: Power system opportunities and best practices*, IEA, 2022, p. 3.; available at: https://iea.blob.core.windows.net/assets/3520710c-c828-4001-911c-ae78b645ce67/UnlockingthePotentialofDERs_Powersystemopportunitiesandbestpractices.pdf (accessed on 24 August 2023).

3170 See Article 3.2. of the *14th Five-Year Plan on Renewable Energy Development*, NDRC, NEA, MOF, the MLR, MEE, Ministry of Housing and Urban-Rural Development, Ministry of Agriculture and Rural

The 14th Renewable Energy FYP promotes the use of medium and deep geothermal energy to provide heating in the northern regions of China, and to explore the application of medium and deep geothermal energy refrigeration technology on the south-eastern coast of China. The plan also encourages the development of soil source heat pumps, recycled water source heat pumps and surface water source heat pumps. It aims to expand the scale of development and utilisation of shallow geothermal energy. Moreover, the plan calls for promoting the development of high-temperature geothermal power generation in regions such as Tibet, Qinghai and Sichuan, supporting the demonstration of advanced technologies such as hot dry rock and enhanced geothermal power generation and promoting medium and low temperature geothermal power generation in areas rich in medium and low temperature geothermal resources, such as the eastern and central regions of China[3171].

21.2.4. 14TH FIVE YEARS PLAN FOR A MODERN ENERGY SYSTEM

During the 13th FYP period, China sought to modernise its energy system and continued to pursue that ambition during the 14th FYP period. The 14th Five Years Plan for a Modern Energy System (*'14th Modern Energy FYP'*) describes expediting the green and low-carbon transformation of energy as a key aspect of developing a modern energy system[3172] and references expanding the clean energy industry, implementing the renewable energy transition, promoting the construction of a new electricity power system and gradually increasing the proportion of new energy in China's energy sector. According to the plan, China can then reach its carbon peak and achieve carbon neutrality in a 'scientific and orderly' manner while continuously improving its green development[3173].

Accelerating large-scale and high-quality wind and solar power generation development is one way China plans to realise its green and low-carbon energy transformation goals[3174]. Doing so, according to the plan, requires developing both centralised and distributed wind and solar power generation capabilities[3175]. Additionally, the plan identifies geothermal resources as another way to realise the green and low-carbon energy transformation and actively promotes using geothermal power to provide heating and cooling where viable[3176].

The 14th Modern Energy FYP explains the various fiscal, taxation and financial support measures that should be put in place to implement these goals, and mention, in particular, 'preferential tax policies', 'increase[d] support for renewable energy, energy conservation and carbon reduction' and the development of a 'green financial system'.[3177]

Affairs, China Meteorological Administration, State Forestry and Grassland Administration, 2022; available at: https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202206/P020220602315308557623.pdf (accessed on 24 August 2023).

3171 *Ibid.*, Article 3.5.

3172 See Chapter 1, Section 2 of the *14th Five-Year-Plan for a Modern Energy System,* NDRC and NEA, 2022; available at: http://www.gov.cn/zhengce/zhengceku/2022-03/23/5680759/files/ccc7dffca8f24880a80af12755558f4a.pdf (accessed on 24 August 2023).

3173 *Ibid.*, Chapter 4.

3174 *Ibid.*.

3175 *Ibid.*

3176 *Ibid.*

3177 *Ibid.*, Chapter 7.

21.2.5. 14TH FIVE YEARS PLAN FOR NEW ENERGY STORAGE DEVELOPMENT

China emphasizes that new energy storage is important for building a modern electrical power system and achieving its carbon peak and carbon neutrality goals, an ambition embodied in its *14th Five Years Plan for New Energy Storage Development*[3178]. By the end of 2025, China aims to have new energy storage capacity for large-scale commercial applications, and by the end of 2030, new energy storage should be 'fully market oriented', with technological innovation allowing China to be a world leader in new energy storage[3179].

The 14th Five Years Plan for New Energy Storage Development promotes R&D of new energy system technologies, the development of joint industry-academic research programs, industrialising new energy storage systems, developing large-scale new energy systems, increasing the speed at which these systems can be brought to market, providing necessary 'policy guarantees' and improving the management of new energy storage systems[3180]. On R&D related to key technologies and equipment, the plan mentions conducting research on key technologies and equipment for sodium-ion batteries, new lithium-ion batteries, lead-carbon batteries, liquid flow batteries, compressed air, hydrogen (ammonia) energy storage and thermal (cold) energy storage; conducting research on energy storage technologies such as superconducting and supercapacitors and conducting research on new generation high-energy density storage technologies such as liquid metal batteries, solid-state lithium-ion batteries and metal-air batteries[3181]. The plan also calls for achieving breakthroughs in safety technology and smart-control technology related to new energy storage[3182].

On policy support, the plan directs localities to increase their support for large-scale energy storage projects, including by using existing funds to support the industrialisation and application of new energy storage technology, and by supporting the energy storage development fund to integrate new energy storage into the green energy financial system[3183].

21.2.6. OTHER STRATEGIES AND PLANS

21.2.6.1. NATIONAL STRATEGIES AND PLANS

The Strategy for the Revolution in Energy Production and Consumption (2016-2030) calls for the aggressive development of wind and solar energy and the utilisation of geothermal energy in cities and regions where conditions permit[3184]. This strategy also instructs government agencies to promote the acceleration of technological R&D and the production of equipment for large-scale land and offshore wind power. For efficiently generating solar power, the strategy focuses on R&D related to solar cell materials, PV conversion technology, smart PV

3178 NDRC and NEA (2022). *14th Five-Year Implementation Plan for New Energy Storage Development*; available at: http://www.gov.cn/zhengce/zhengceku/2022-03/22/5680417/files/41a50cec48e84cc4adfca855c3444f6b.pdf (accessed on 24 August 2023).

3179 *Ibid.*, Article 1.3.

3180 *Ibid.*

3181 *Ibid.*, Article 2.1.

3182 *Ibid.*.

3183 *Ibid.*

3184 NDRC and NEA, *Strategy for the Revolution in Energy Production and Consumption (2016-2030)*, 2016, Chapter 5, Section 2; available at: http://www.gov.cn/xinwen/2017-04/25/5230568/files/286514af354e41578c57ca38d5c4935b.pdf (accessed on 24 August 2023).

power stations and wind-PV-water complementary power generation technology. The strategy also prioritises the development of energy storage technology.

In 2023, MIIT, Ministry of Education, MOST, PBOC, CBIRC and Energy Bureau issued the Guiding Opinions on Promoting the Development of the Energy Electronics Industry[3185] that explicitly proposes developing efficient solar products and technologies. The Guiding Opinions encourage R&D spending and breakthroughs in various PV technologies, including smart PVs, high efficiency and low-cost crystalline silicon cells, N-type high-efficiency cells and flexible thin-film cells, among others[3186]. On policy support, the Guiding Opinions direct the "*full use of relevant central and local channels to implement relevant preferential policies and measures*"[3187]. Moreover, firms in the industry should be identified for special policy treatment (e.g., as a '*little giant*' enterprise for small- and medium-enterprises). The Guiding Opinions promote the "*use [of] credit, bonds, funds, insurance and other financial instruments to increase support for the supply chain of the energy and electronics industry*"[3188].

In 2022, China promulgated the 14th FYP on the Development of Energy Efficient Buildings and Green Construction[3189]. The ambitions of the plan include that by the end of 2025, the installed capacity of solar power in new buildings across China will reach more than 50 million KW, the application area of buildings with geothermal energy will exceed 100 million square metres and the replacement rate of renewable energy in urban buildings will reach 8%[3190]. The plan seeks to promote the use of solar energy in buildings by coordinating the use of solar PV and solar thermal systems based on the resources available[3191]. It also calls for promoting the application of geothermal energy (including through GHP technology and other geothermal technologies), air heat energy and biomass energy, among others, to meet the various energy demands of buildings[3192]. The plan directs policy support for energy-saving renovations of existing structures, renewable energy application and green farmhouses. The plan also encourages the development of green finance, credit and insurance support, improved government procurement standards for green building materials and carbon emission trading for larger buildings[3193].

Promotion of power generation and the comprehensive utilisation of technologies for advanced renewable energy is one of the five key tasks listed in the 14th FYP on Technological Innovation

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3185 *Guiding Opinions on Promoting the Development of the Energy Electronics Industry*, MIIT, Ministry of Education, MOST, PBOC, China Banking and Insurance Regulatory Commission and Energy Bureau, 2022; available at: http://www.gov.cn/zhengce/zhengceku/2023-01/17/content_5737584.htm (accessed on 24 August 2023).

3186 *Ibid.*, Article 3.

3187 *Ibid.*, Article 8(21).

3188 *Ibid.*

3189 *14th Five-Year Plan on the Development of Energy Efficient Buildings and Green Construction*, Ministry of Housing and Urban-Rural Development, 2022; available at: http://www.gov.cn/zhengce/zhengceku/2022-03/12/content_5678698.htm (accessed on 24 August 2023).

3190 *Ibid.*

3191 *Ibid.*

3192 *Ibid.*

3193 *Ibid.*

in the Energy Sector[3194]. The plan includes the development of new high-efficiency and low-cost wind power technology, technology for the recycling and reuse of decommissioned wind turbines, high-powered medium-voltage DC PV power generation systems and high-powered DC boost converters, high-efficiency perovskite battery production, high-efficiency and low-cost PV cell technology, technology for the recycling and reuse of PV modules, solar thermal power generation and utilisation technology and geothermal energy technology[3195].

21.2.6.2. SUB-NATIONAL PLANS

On the subnational level, Shanxi issued in August 2022 the Guiding Opinions on Fully Promoting the High-quality Development of Geothermal Energy Industry, which included the promotion of GHP technologies to achieve the goal of realizing low-cost heating and cooling in residential buildings in rural regions and encouraged the adoption of heat pump technologies in mines[3196]. Policy support measures include the provision of land, tax relief, reduced benchmark prices for the transfer of geothermal mining rights and R&D subsidies, among others[3197].

Hunan's 14th Five Years Plan on Renewable Energy lists the development of wind power, solar power and geothermal power as key tasks during the plan's lifespan. By the end of 2025, Hunan aims to achieve total installed wind turbine power generation capacity of over 12 million KW, and total installed solar PV power generation capacity of over 13 million KW. The plan also calls for promoting the centralised supply of geothermal energy[3198]. In furtherance of these ambitions, the plan directs certain cities and prefectures to provide incentives and guidance to promote the accelerated development of renewable energy[3199].

Qinghai's 14th FYP on Energy Development sets the goal of generating 45.8 million KW of solar PV power and 16.5 million KW of wind power by 2025, adding 30 million KW of solar PV power and 8.07 million KW of wind power over 2020 capacity levels[3200]. The plan promotes the large-scale development of bases for solar PV and wind power generation, distributing new energy generation capabilities throughout the province, strengthening clean power transmission across provinces, developing projects that integrate energy from multiple sources and regulating capacity from multiple complementary energy sources[3201]. To achieve these goals,

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3194 See Article 3.1. of the *14th Five-Year Plan on Technological Innovation in the Energy Sector,* NEA and Ministry of Science and Technology, 2021; available at: http://www.gov.cn/zhengce/zhengceku/2022-04/03/5683361/files/489a4522c1da4a7d88c4194c6b4a0933.pdf (accessed on 24 August 2023).

3195 *Ibid.,* Articles 3.1.2–3.1.3 and Article 3.1.4 (11).

3196 See Sections 2.3 and 2.5. of the *Guiding Opinions on Fully Promoting the High-quality Development of Geothermal Energy Industry*, General Office of Shanxi Provincial People's Government, 2022; available at: http://www.shanxi.gov.cn/zfxxgk/zfxxgkzl/fdzdgknr/lzyj/szfbgtwj/202208/t20220819_6966730.shtml (accessed on 24 August 2023).

3197 *Ibid.,* Article 3.

3198 See Article 4.1.1, Article 4.1.2, Article 4.2.2 of the *14th Five-Year Plan on Renewable Energy of Hunan Province*, Hunan Provincial Development and Reform Commission, 2022; available at: https://fgw.hunan.gov.cn/fgw/xxgk_70899/zcfg/gfxwj/202206/t20220627_26526958.html (accessed on 24 August 2023).

3199 *Ibid.*, Article 6(3).

3200 *14th Five-Year Plan on Energy Development*, Qinghai Provincial People's Government, 2022; available at: http://www.qinghai.gov.cn/xxgk/xxgk/fd/zfwj/202203/t20220309_189260.html (accessed on 24 August 2023).

3201 *Ibid.*

the plan notes that "*[f]inancial and taxation support will be increased, and relevant tax preferential policies will be implemented for qualified clean energy projects*", and that financial institutions should provide credit, bonds, and insurance to green projects that support clean energy development[3202]. The plan will also provide "*construction land plan guarantees*" to projects "*included in the list of national and provincial key projects*"[3203].

For wind power, Shandong's 14th FYP on Energy Development focuses on offshore capacity, aiming to building a 10 million KW offshore wind power base that focuses on three major geographies – Bozhong, southern peninsula and northern peninsula – and sets the goal that by the end of 2025, the installed capacity of wind power turbines in Shandong Province will reach 25 million KW. For solar PV power generation, the plan aims to have by the end of 2025 installed PV power generation capacity of 57 million KW. The plan also discusses other forms of clean energy, including geothermal energy[3204]. Policy incentives include land and sea use provisions, encouraging policy banks to support major energy project construction, credit for green projects and tax preferences for emission reduction and energy conservation[3205].

In May 2021, the Zhejiang Provincial Development and Reform Commission issued the 14th FYP on Renewable Energy Development[3206], pursuant to which Zhejiang encourages companies to pursue technological transformation and upgrade wind turbines with a capacity of less than 1.5 MW per turbine. The plan also calls for the vigorous development of wind and solar power and the development of biomass energy, geothermal energy and ocean energy depending on local conditions. The plan aims for installed capacity that exceeds 27.5 KW for solar power and 6.4 million KW for wind power turbines in the province by the end of the 14th FYP period. The plan promotes the deeper implementation of various preferential policies for renewable energy, including tax, land and lending policies[3207].

21.3. KEY CHINESE ENVIRONMENTAL GOODS INDUSTRIES

21.3.1. SOLAR CELL INDUSTRY

The solar cell value chain can be categorised into three main segments[3208]. The first segment consists of upstream raw materials and equipment for solar cells, including silica; silicon wafers; silver or aluminium paste; copper, indium and selenium; gallium arsenide ('*GaAs*') and cadmium telluride ('*CdTe*'); polymer compounds; plasma-enhanced chemical vapour deposition ('*PECVD*'); automatic sorting machines and fast sintering furnaces; screen printing

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3202 *Ibid.*, Article 6(6)

3203 *Ibid.*

3204 *14th Five-Year Plan on Energy Development of Shandong Province*, Shandong Provincial People's Government, 2021; available at: http://www.shandong.gov.cn/module/download/downfile.jsp?classid=0&filename=2f6a3b6e732648f29920343c045ae5a7.pdf (accessed on 24 August 2023).

3205 *Ibid.*, Chapter 4(4).

3206 See Section 3.2 of the *14th Five-Year Plan on Renewable Energy Development in Zhejiang Province*, Zhejiang Provincial Development and Reform Commission, 2021; available at: https://fzggw.zj.gov.cn/art/2021/6/23/art_1229123366_2305635.html (accessed on 24 August 2023).

3207 *Ibid.*, Article 4(4).

3208 *Analysis of Upstream, Midstream, and Downstream Sectors of Value Chain of the Solar Cell Industry in China in 2022*, ASKCI, 16 August 2022; available at: https://www.askci.com/news/chanye/20220816/1722431958188.shtml (accessed on 24 August 2023).

equipment and etching machines. The second segment consists of solar cells, including crystalline silicon PV cells; monocrystalline silicon PV cells; polycrystalline silicon PV cells; thin film PV cells; silicon-based thin-film PV cells; copper, indium, gallium, and selenium-based thin film PV cells and CdTe-based thin film PV cells. The third segment consists of downstream sectors, including PV modules, crystalline PV modules and thin-film PV modules. These modules are then incorporated into PV power stations, PV heating, building-integrated PV systems and PV transportation.

Like in many strategic industry sectors, many Chinese solar cell companies are closely connected to the government. For example, *Shanghai Academy of Spaceflight Technology*[3209] – a division of *China Aerospace and Technology Corporation*, the state-owned military and defence company – is the major shareholder and actual controller[3210] of *Shanghai Aerospace Automobile Electromechanical Co, Ltd* (*'HT-SAAE'*) [3211], a company mainly engaged in the integration of polysilicon, solar cells, battery packs and new 'PV + energy storage' systems as well as other products and technologies in the civil-military integration field[3212]. Furthermore, it is worth noting that 83% of China's large-scale grid-connected solar power plants were SOEs as of 2020[3213], thus it may potentially influence the whole manufacturing industry chain.

China has achieved a dominant position in the solar industry across the supply chain, including in solar cells. The IEA reported that from 2010 to 2021 China became dominant in the global supply of wafer, cell and module manufacturing while China's share of global polysilicon production capacity almost tripled during this period[3214]. IEA estimated that China's global share in all stages of PV power manufacturing exceeded 80%, more than double of its 36% share in global PV deployment[3215]. China accounts for the vast majority of announced manufacturing capacity expansion plans for solar PV components through 2030, including 85% for solar cells and 90% for wafers[3216].

3209 Shanghai Academy of Spaceflight Technology (n.d.). *Company Profile*; available at : http://www.sast.spacechina.com/n1323876/n1323907/index.html (accessed on 24 August 2023).

3210 Under China's *Company Law*, an actual (or 'de facto') controller is an entity that 'although is not a shareholder of the company, is capable of actually controlling the conduct of the company through investment relations, agreements or other arrangements.' Ministry of Commerce (2019). *Company Law of the People's Republic of China*, Article 216(III); available at: http://mg.mofcom.gov.cn/article/policy/201910/20191002905610.shtml (accessed on 24 August 2023).

3211 HT-SAAE, *Annual Report*, 2022, p. 89; available at : http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=gssh0600151&stockCode=600151&announcementId=1216272648 (accessed on 24 August 2023).

3212 HT-SAAE (n.d.). *About Us*; available at: http://www.ht-saae.com/En/aboutUs.aspx (accessed on 24 August 2023).

3213 Zhang, F. and Zuo, J. (15 February 2023). *State-Owned Enterprises' Responses to China's Carbon Neutrality Goals and Implications for Foreign Investors*, Georgetown Journal of International Affairs; available at: https://gjia.georgetown.edu/2023/02/15/state-owned-enterprises-responses-to-chinas-carbon-neutrality-goals-and-implications-for-foreign-investors/ (accessed on 24 August 2023).

3214 IEA 2022, *Special Report on Solar PV Global Supply Chain*, p. 17; available at: https://iea.blob.core.windows.net/assets/d2ee601d-6b1a-4cd2-a0e8-db02dc64332c/SpecialReportonSolarPVGlobalSupplyChains.pdf (accessed on 24 August 2023).

3215 *Ibid.*

3216 IEA 2023, *Energy Technology Perspectives 2023*, p. 22; available at: https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 24 August 2023).

China is also the largest exporter of solar cells, exporting 3.201 billion solar cells for a total value of USD 28.46 billion (~EUR 24.06 billion) in 2021. In quantity, the 2021 figures reflected a 17.56% increase over 2020 export levels, while the value of solar cell exports increased 43.79% over the previous year[3217]. From January to October 2022, China increased its exports of solar cells by 24.06% over the same period in 2021, exporting a total 3.294 billion solar cells over that period; this represented an increase in total export value of 75.58% to USD 40.033 billion (~EUR 37.915 billion)[3218]. These increases mirror an increase in Chinese exports of PV products overall: in 2018, the value of Chinese exports of PV products was USD 15 billion (~EUR 12.7 billion), which increased to USD 21 billion (~EUR 18.8 billion) in 2019, to USD 22 billion (~EUR 19.3 billion) in 2020, before increasing again to USD 32 billion (~EUR 27.1 billion) in 2021 and growing 64% to USD 52 billion (~EUR 49.4 billion) in 2022[3219].

21.3.2. WIND TURBINE INDUSTRY

The wind industry value chain consists of five main segments: raw materials (rare earth metals, steel and copper wire), components (blades, towers and blade bearings), wind turbines (turbines that either have a horizontal axis or a vertical axis), wind farms and grids[3220].

The actual controller of several large wind turbine companies in China – including Zhejiang Windey Co, Ltd ('*Windey*')[3221], CRRC Shandong Co Ltd ('*CRRC Shandong*')[3222], China State Shipbuilding Corporation ('*CSSC*')[3223], Shanghai Electric Wind Power Group ('*Electric Wind Power*')[3224], Dongfang Electric Corporation ('*Dongfang Electric*')[3225] and Guodian United Power Technology Co, Ltd ('*United Power*')[3226] – is the SASAC or its local counterparts, or

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3217 *Research Report on China's Solar Cell Export 2023-2032*, Research and Markets, 2022; available at: https://www.researchandmarkets.com/reports/5702082/research-report-on-chinas-solar-cell-export (accessed on 24 August 2023).

3218 *Ibid.*

3219 Wood Mackenzie, *China's solar exports booming, up 64% in 2022 despite global trade tensions*, 23 May 2023; available at: https://www.woodmac.com/press-releases/chinas-solar-exports-booming-up-64-in-2022-despite-global-trade-tensions/ (accessed on 24 August 2023).

3220 Liu, J., Wei, Q., Dai. Q and Liang, C., *Overview of Wind Power Industry Value Chain Using Diamond Model: A Case Study from China*, Applied Sciences, 2018, p. 2; available at: https://www.researchgate.net/publication/328256036_Overview_of_Wind_Power_Industry_Value_Chain_Using_Diamond_Model_A_Case_Study_from_China (accessed on 24 August 2023).

3221 Zhejiang Windey Co, Ltd., *2021 Annual Report*, 2022, p. 78; available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=szse&orgId=9900036169&stockCode=300772&announcementId=1212522777 (accessed on 24 August 2023).

3222 CRRC Shandong Co Ltd., *2022 Annual Report*, 2023, p. 81; available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=9900005127&stockCode=601766&announcementId=1216271749 (accessed on 24 August 2023).

3223 List of SOEs under SASAC authority: http://wap.sasac.gov.cn/n2588045/n27271785/n27271792/c14159097/content.html (accessed on 11 September 2023 2023).

3224 Shanghai Electric Wind Power Group 2023, *2022 Annual Report*, p. 117; available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=nssc1000609&stockCode=688660&announcementId=1216235744 (accessed on 28 August 2023).

3225 Dongfang Electric Corporation, 2023, *2022 Annual Report*, p. 82; available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=gssh0600875&stockCode=600875&announcementId=1216301205 (accessed on 28 August 2023).

3226 Qixin, *Company Profile of United Power*; https://www.qixin.com/company/9f2961a7-72bc-4ab4-88af-4fe5e2ce9946 (accessed on 11 September 2023).

the State Council itself. Windey, CRRC Shandong, CSSC, Electric Wind Power, Dongfang Electric and United Power collectively have 38.5% market share in China[3227].

China occupies a major share of the global wind turbine market. In component manufacturing, China accounts for 60% of global capacity and almost half of exports, with most destined for Europe and other countries in Asia[3228]. Further, China accounts for the vast majority of announced manufacturing capacity expansion for onshore wind turbine components through 2030, including 85% for turbine blades and 90% for nacelles and towers[3229].

In 2021, the top 15 manufacturers globally accounted for almost 90% of the wind turbine capacity deployed, and more than 55% of them were Chinese companies[3230]. In its 2023 European Wind Power Action Plan, the Commission also noted that out of the world's 10 largest wind turbine manufacturing companies (covering over 80% of demand for wind turbines globally), 4 have their headquarters in the EU, while 4 are located in China[3231]. According to BloombergNEF, China added 49 GW of new wind capacity in 2022, which amounted to more than half of the wind capacity additions globally that year[3232]. Accordingly, BloombergNEF listed six Chinese firms in its list of the 10 wind turbine manufacturers with the largest added installed capacity in 2022[3233]. Xinjiang Goldwind Science & Technology Co, Ltd ('*Goldwind*') – a Chinese wind turbine manufacturer – was the largest manufacturer globally by GW of commissioned wind capacity. Other Chinese companies in the top 10 included Envision Energy, Ming Yang Wind Power Group ('*Mingyang*'), Windey, Sany Heavy Industry Co Ltd and CRRC[3234].

It should be further mentioned that in its past TDI investigations concerning the wind energy industry, the Commission established the presence of significant distortions in the sector, such as concerning wind towers[3235] or glass fibre fabrics[3236].

21.3.3. GEOTHERMAL HEAT PUMP INDUSTRY

3227 CWEA 2023, *Statistics Report on Wind Installed Capacity in 2022 in China*, available at : http://www.eastwp.net/news/show.php?itemid=68198 (accessed on 28 August 2023).

3228 IEA 2023, *Energy Technology Perspectives 2023*, p. 22; available at: https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 28 August 2023).

3229 *Ibid.*, p. 22.

3230 *Ibid.*, p. 95.

3231 See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2023) 669 final, 24 October 2023, p. 3.

3232 Gusick, W. (23 March 2023). *Goldwind and Vestas in Photo Finish for Top Spot as Global Wind Power Additions Fall*, Bloomberg NEF; available at: https://about.bnef.com/blog/goldwind-and-vestas-in-photo-finish-for-top-spot-as-global-wind-power-additions-fall/ (accessed on 28 August 2023).

3233 *Ibid.*

3234 *Ibid.*

3235 See the Commission Implementing Regulation (EU) 2021/2239 of 15 December 2021 imposing a definitive anti-dumping duty on imports of certain utility scale steel wind towers originating in the People's Republic of China, *OJ L 450, 16.12.2021, p. 59–136, rec. 52-135.*

3236 See the Commission Implementing Regulation (EU) 2020/492 of 1 April 2020 imposing definitive anti-dumping duties on imports of certain woven and/or stitched glass fibre fabrics originating in the People's Republic of China and Egypt, *OJ L 108, 6.4.2020, p. 1–91, rec. 98-167.*

GHPs use the more consistent temperature below the earth's surface to heat or cool a space or to heat water[3237]. Other types of heat pumps include air-source and water-source heat pumps[3238]. The value chain includes heat pump components, such as fans, pumps, tanks, expansion valves, heat exchanges and compressors; the manufacturing of the heat pumps themselves and the application of the heat pumps in various settings to provide climate control[3239].

The GHP industry engages SOEs in manufacturing. For example, SASAC is the actual controller of both Tsinghua Tongfang Artificial Environment Co, Ltd[3240] and Beijing Yongyuan Heat Pump Co, Ltd[3241]. China's share of the global geothermal market has grown significantly since the 1990s. In 1995, China accounted for only a 0.04% share of installed GHP capacity[3242], but by 2015, it held a 23.61% share[3243]. By 2020, China's share of global installed GHP capacity reached 34.11%, the largest share of any country[3244]. Although heat pump manufacturing is often done in the market it serves, China is unique as an exporter of a large amount of heat pumps[3245]. China is a net exporter of heat pumps, generally, and accounted for almost 40% of the manufacturing capacity for mass-manufactured heat pump technologies and components in 2021[3246]. Relative to other types of heat pump products in China, the scale of GHPs is relatively small, with the size of the GHP market at only CNY 1.3 billion (~EUR 170.4 million) – 6.2% of the overall heat pump market – in 2021[3247].

21.4. MARKET DISTORTIONS

3237 US Environmental Protection Agency. (n.d.). *Geothermal Heating and Cooling Technologies*; available at: https://www.epa.gov/rhc/geothermal-heating-and-cooling-technologies#Ground-Source-Heat-Pumps (accessed on 21 April 2023).

3238 US Department of Energy. *Heat Pump Systems*; available at: https://www.energy.gov/energysaver/heat-pump-systems (accessed on 28 August 2023).

3239 *Report on Renewable Energy in China-Insights into Heat Pump Industry in 2023*, 36kr.com, 30 March 2023; available at: https://36kr.com/P/2192004679434625 (accessed on 28 August 2023); *Energy Technology Perspectives 2023*, IEA, 2023, p. 99; available at: https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 28 August 2023).

3240 Tsinghua Tongfang Co Ltd., *2021 Annual Report*, p. 27 and 93; available at: http://www.cninfo.com.cn/new/disclosure/detail?plate=sse&orgId=gssh0600100&stockCode=600100&announcementId=1213178161 (accessed on 28 August 2023).

3241 Qichacha. *Company Profile of Beijing Yongyuan Heat Pump Co Ltd.*; available at: https://www.qcc.com/firm/9e9f838046650633a001b98993818673.html (accessed on 14 September 2023).

3242 China Natural Resources News, *China Is Leading the World in the Geothermal Heat Pump Industry*, 21 August 2019; available at: https://www.mnr.gov.cn/dt/ywbb/201908/t20190821_2459133.html (accessed on 28 August 2023).

3243 *Ibid.*

3244 Sufang, K. (2021). Analysis of the Market Size and Development Prospect of China's Ground Source Heat Pump Industry in 2021. The installed capacity is expected to exceed 40,000 MW in 2025, Forward-The Economist; available at: https://www.qianzhan.com/analyst/detail/220/210507-53617fba.html (accessed on 28 August 2023).

3245 IEA (2023), *Energy Technology Perspectives 2023*, p. 99; see : https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 28 August 2023).

3246 *Ibid.*, p. 96.

3247 XYZ Research (2023), *Report on Analysis of Global and China Heat Pump Industry*, p. 5; available at: https://xyz-research.com/uploads/20230410/16872e7cae2518f1defeca86a592858e.pdf (accessed on 28 August 2023).

It is important to note that China's horizontal market distortive policies discussed in other sections in this report – such as the special privileges afforded to SOEs (see Chapter 5) – apply equally to the environmental goods.

21.4.1. Public Procurement and Purchasing

China's *Government Procurement Law* specifically includes a preference for domestic content over foreign content when possible and subject to few exceptions[3248] (see more in Chapter 7). China has historically provided traditional domestic preferences to the renewable energy sector. Moreover, with a near-100% share in the domestic market for these industries, Chinese manufacturers are well-positioned to take advantage of the domestic demand generated by feed-in tariffs ('*FITs*') and competitive auction policies, which can, in turn, insulate the industry from varying demand dynamics outside of China[3249]. Although not considered public procurement in the traditional sense[3250], these government purchases function similarly, with the government purchasing the output of these industries.

21.4.2. Grants and Other Subsidies

China has used grant and subsidy schemes to foster its domestic solar industry. As the IEA noted, China's solar industry policies focused less on promoting domestic demand but rather focused on generating supply in response to "*the considerable export opportunities*"[3251]. Accordingly, China provided "[g]*rants, low-cost loans from state banks and funds from the Science and Technology Ministry*", which "*led to the establishment of several pioneering domestic manufacturers*"[3252].

21.4.3. Tax Relief

China's main tax on businesses is the EIT, for which HNTEs have received a preferential rate of 15% – 10 points lower than the typical 25% – since 2008[3253]. Businesses in the renewable energy industry – including companies in the solar, wind and geothermal energy industries –

3248 See Article 10 of the *Government Procurement Law of the PRC*, National People's Congress, 2002; available at: http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/06/content_1382108.htm (accessed on 28 August 2023).

3249 IEA (2022), *Special Report on Solar PV Global Supply Chains*, p. 108; available at: https://iea.blob.core.windows.net/assets/d2ee601d-6b1a-4cd2-a0e8-db02dc64332c/SpecialReportonSolarPVGlobalSupplyChains.pdf (accessed on 28 August 2023).

3250 Canada – Certain Measures Affecting the Renewable Energy Generation Sector; Canada – Measures Relating to the Feed-In Tariff Program. Reports of the Appellate Body, WT/DS412/AB/R, Para. 5.79., WTO, 2013; available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/412ABR.pdf (accessed on 28 August 2023).

3251 IEA 2022, *Special Report on Solar PV Global Supply Chains*, p. 107; available at: https://iea.blob.core.windows.net/assets/d2ee601d-6b1a-4cd2-a0e8-db02dc64332c/SpecialReportonSolarPVGlobalSupplyChains.pdf (accessed on 28 August 2023).

3252 *Ibid.*

3253 WTO 2016, *Replies to questions from the European Union regarding the new and full notification of China*, available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=234022,234017,234018,232295,232142,232161,232160,232129,232060,232024&CurrentCatalogueIdIndex=9 (accessed on 28 August 2023).

can qualify for the HNTE preferred rate[3254]. Chinese law sets out certain conditions that eligible businesses must meet to qualify as HNTEs, which include that no more than 40% of R&D expenses are incurred outside of China[3255]. Moreover, the HNTE must own the intellectual property of the critical technologies for its products or services, which it can acquire through its own R&D or through transfer, donation or M&A[3256].

21.4.4. PREFERRED ACCESS TO CREDIT

The solar and wind industries' status as a strategic emerging industry and a high-technology sector meant that they could access lines of credit at preferred rates for expanding manufacturing capacity[3257]. In 2021, pursuant to guiding opinions of the CCP and the State Council[3258], the CDB established a special loan programme for '*carbon peaking and carbon neutrality*', which would provide CNY 100 billion (~EUR 13.1 billion) in 2021 and CNY 500 billion (~EUR 65.6 billion) over the lifespan of the 14th FYP, which was made available to solar power generation projects[3259]. Moreover, the *Action Plan for Carbon Peaking Before 2030* released by the State Council in 2021 directed "*financial institutions to provide long-term and low-cost funds for green and low-carbon projects and encourage*[d] *development policy financial institutions to provide long-term and stable financing support for carbon peaking actions in accordance with the principle of market-oriented rule of law*"[3260]. In 2021, the PBOC announced it would provide preferential access to loan and credit support to the wind and solar industries to counteract production and operations difficulties stemming from tight cash

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3254 State Taxation Administration, *High-tech enterprises are levied enterprise income tax at a reduced rate of 15%*, 11 August 2022; available at: http://www.chinatax.gov.cn/chinatax/c102089/c5178717/content.html (accessed on 28 August 2023); *High-tech fields supported by the state*, Ministry of Commerce, 2008; available at: http://www.mofcom.gov.cn/aarticle/bh/200805/20080505534363.html (accessed on 11 September 2023); *China's High and New-Technology Enterprise (HNTE) Program*, US-China Business Council, 2013; available at: https://www.uschina.org/sites/default/files/2013%20HNTE%20Backgrounder.pdf (accessed on 28 August 2023).

3255 See Article 11 of the Notice of the MIST, the MOF and the State Administration of Taxation on Revising and Issuing the 'Administrative Measures for the Identification of High-tech Enterprises', State Council, 2016; available at: http://www.gov.cn/gongbao/content/2016/content_5076985.htm (accessed on 28 August 2023).

3256 *Ibid.*, Article 11.

3257 Nahm, J. (2023). *How Solar Developed from the Bottom-Up in China*, University of California Institute on Global Conflict and Cooperation; available at: https://ucigcc.org/publication/how-solar-developed-from-the-bottom-up-in-china/ (accessed on 28 August 2023).

3258 See Article 31 of the Guiding Opinions of the Central Committee on Completely, Accurately and Comprehensively Implementing the New Development Concept and Doing a Good Job of Carbon Neutrality at Carbon Peak, Central Committee of the CCP and State Council, 2021; available at: https://www.gov.cn/zhengce/2021-10/24/content_5644613.htm (accessed on 28 August 2023).

3259 Ministry of Finance (2021). *Reply of the Ministry of Finance to Recommendation No. 9142 of the Fourth Session of the 13th National People's Congress*; available at: http://jjs.mof.gov.cn/jytafwgk_8360/2021jytafwgk_1/rddbjyfwgk/202108/t20210805_3743186.htm (accessed on 28 August 2023).

3260 See Article 5(3) of the *Action Plan for Peaking Carbon Emissions before 2030*, State Council, 2021; available at: https://www.gov.cn/zhengce/content/2021-10/26/content_5644984.htm (accessed on 30 August 2023).

flows[3261], suggesting that the government is ready to intervene to assist the renewable energy industries, when needed.

21.4.5. Export Financing

Historically, China's two major policy banks – CDB and EXIM – have been the dominant players in energy financing, providing the same amount in loans as all Western development banks combined[3262]. China's export financing in the renewable energy sector was a minor share of its overall financing of global energy projects[3263]. China's policy banks offered minimal financing for renewable energy projects abroad[3264]. In September 2021, President Xi Jinping announced that China would no longer build coal-powered projects abroad[3265], thus, an uptick in future overseas financing of renewable energy projects remains possible. Moreover, the 14th FYP specifically promotes the "*vigorous* […] *develop*[ment of] *green finance*"[3266].

China's BRI is increasingly prioritising infrastructure investments in renewable energy following President Xi Jinping's September 2021 announcement. In August 2023, Reuters reported – based upon a report from Fudan University's Green Finance and Development Centre – that 56% of China's construction and investment in the energy sector under BRI was in renewable energy projects[3267]. Included among these projects were solar and wind projects[3268].

21.4.6. Use of Forced Labour

Manufacturers sourcing polysilicon made with forced labour obtain cost advantages over those manufacturers who procure polysilicon from ethical sources[3269] (see also Section 13.9.).

3261 Reuters (25 March 2021), *China to step up financial support for wind and solar power*; available at: https://www.reuters.com/business/energy/china-step-up-financial-support-wind-solar-power-2021-03-25/ (accessed on 22 April 2023).

3262 Liu, C. and Urpilainen, J. (7 January 2021). *Why the United States should compete with China on global clean energy finance*. Brookings Institute; available at: https://www.brookings.edu/research/why-the-united-states-should-compete-with-china-on-global-clean-energy-finance/ (accessed on 30 August 2023).

3263 From 2000 to 2018 only 1.65% of power projects financed by CDB and EXIM were for solar projects and 0.91 for wind projects. See Kong, B. and Gallagher, K. (2020). *Chinese development finance for solar and wind power abroad*, Boston University Global Development Policy Center, p. 3; available at: https://www.bu.edu/gdp/files/2020/02/WP9-Kong-Bo-inc_abstract.pdf (accessed on 30 August 2023).

3264 Boston University Global Development Policy Center (2020), *Inadequate Demand and Reluctant Supply: The Limits of Chinese Official Development Finance for Foreign Renewable Power*, available at: https://www.bu.edu/gdp/2020/11/17/inadequate-demand-and-reluctant-supply-the-limits-of-chinese-official-development-finance-for-foreign-renewable-power/ (accessed on 30 August 2023).

3265 MFA, Xi Jinping Attends the General Debate of the 76th Session of the United Nations General Assembly and Delivers an Important Speech, 22 September 2021; available at: https://www.fmprc.gov.cn/mfa_eng/wjb_663304/zzjg_663340/gjs_665170/gjsxw_665172/202109/t20210923_9580159.html (accessed on 30 August 2023).

3266 See Chapter 39, Section 4 of the 14th FYP for National Economic and Social Development and Long-range Objectives for 2035 of the PRC, National People's Congress, 2021; available at: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm (accessed on 30 August 2023).

3267 Hayley, A. (1 August 2023). *China's Belt and Road energy projects set for "greenest" year, research shows*, Reuters; available at: https://www.reuters.com/business/energy/chinas-belt-road-energy-projects-set-greenest-year-research-2023-08-02/ (accessed on 30 August 2023).

3268 *Ibid.*

3269 Wang, S., Lloyd, J. and Núñez-Mujica, G. (2022). *Confronting the Solar Manufacturing Industry's Human Rights Problem*, The Breakthrough Institute; available at: https://thebreakthrough.org/issues/energy/sins-of-a-solar-empire (accessed on 30 August 2023).

According to researchers at Sheffield Hallam University, approximately 45% of the global supply of polysilicon – an input found in approximately 95% of solar modules – is sourced from XUAR, 11 companies in XUAR engaged in forced labour, and 4 other companies were situated within industrial parks that had 'accepted labour transfers' from other provinces[3270].

China's largest wind turbine manufacturer, Goldwind is also based in XUAR and is linked to the Xinjiang Production and Construction Corps, which the EU and the US have sanctioned for human rights violations[3271]. In December 2022, a report by the UK-based Hong Kong Watch listed Goldwind as a firm that has likely engaged in forced labour in XUAR[3272].

21.5. CHAPTER SUMMARY

Solar cells, wind turbines, and GHPs are all environmental goods that play major roles in the transition to more renewable sources of energy. Chinese firms manufacturing these goods have become dominant players in their respective global markets. These positions of dominance reflect a decades-long focus by China on using state support to foster domestic manufacturing capabilities. Moreover, these industries continue to benefit from the distortionary policies that apply horizontally across the Chinese economy. In all three mentioned sectors, China has the largest manufacturing capacity and is likely to continue its growth based on current projections[3273]. Certain forms of support – such as access to the HNTE reduction on EIT and the use of forced labour in the production of needed components – continue to provide Chinese firms with market distortive advantages over their international competitors. Accordingly, the global markets for these environmental goods are distorted by the lingering effects of China's subsidies specific to these industries, the impact of horizontal subsidies across the Chinese economy and the ongoing use of specific forms of state support.

3270 Murphy, K.T. and Elimä, N. (2021). *In Broad Daylight: Uyghur Forced Labour and Global Solar Supply Chains*, Sheffield Hallam University, Helena Kennedy Centre for International Justice, p. 7.

3271 Fromer, J. and Zhou, C. (2020). *As US moves to renewable energy, wind turbines from Xinjiang may get caught in political tempest*, South China Morning Post; available at: https://www.scmp.com/news/china/article/3115771/us-moves-renewable-energy-wind-turbines-xinjiang-may-get-caught (accessed on 31 August 2023); Emmott, R. and Brunnstrom, D. (2021). *West sanctions China over Xinjiang abuses, Beijing hits back at EU*, Reuters; available at: https://www.reuters.com/article/uk-usa-china-eu-sanctions/west-sanctions-china-over-xinjiang-abuses-beijing-hits-back-at-eu-idUSKBN2BE2LF (accessed on 30 August 2023).

3272 Patterson, J., Goodman, S. and Wear, E.A. (2022). *Passively Funding Crimes Against Humanity: How Your Savings May Be Financing Internment Camps and Forced Labor in China*, Hong Kong Watch, p. 16. https://static1.squarespace.com/static/58ecfa82e3df284d3a13dd41/t/638e318e6697c029da8e5c38/1670263209080/EDITED+REPORT+5+DEC.pdf (accessed on 30 August 2023).

3273 *Solar Photovoltaics: Supply Chain Deep Dive Assessment*; US Department of Energy Response to Executive Order 14017, "America's Supply Chains", US Department of Energy, 24 February 2022, p. 37; available at: https://www.energy.gov/sites/default/files/2022-02/Solar%20Energy%20Supply%20Chain%20Report%20-%20Final.pdf (accessed on 30 August 2023); Energy Technology Perspectives 2023, IEA (2023), pp. 118, 224–225; available at: https://iea.blob.core.windows.net/assets/a86b480e-2b03-4e25-bae1-da1395e0b620/EnergyTechnologyPerspectives2023.pdf (accessed on 30 August 2023).

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22.1. INTRODUCTION

The current automotive landscape is comprised of six types of powertrains. Three have an internal combustion engine as the primary source of propulsion: *(i)* internal combustion engine vehicles (*'ICEs'*), *(ii)* hybrid electric vehicles (*'HEVs'*)[3274], and *(iii)* plug-in hybrid electric vehicle (*'PHEVs'*)[3275]. Three others have electric motors as the primary mover: *(iv)* battery electric vehicle (*'BEVs'*)[3276], *(v)* range extended electric vehicle (*'REEVs'*)[3277], and *(vi)* fuel cell electric vehicle (*'FCEVs'*), also called hydrogen electric vehicles (*'H_2EVs'*)[3278].

The global automotive market is going through a profound structural change in the coming years because of the phasing out of ICEs in favour of the other propulsion systems, in particular in the EU, the USA and China.

3274 HEVs have an internal combustion engine and an electric motor that assists only at low speeds. The battery cannot be charged from off-board sources, but it is charged either by the internal combustion engine or through recuperation when braking.

3275 PHEVs have both an internal combustion engine and an electric motor as source of propulsion and can be charged from an external charging point.

3276 BEVs use only electric motors as a source of propulsion and store energy in the battery. The battery can only be charged from the grid while stationary.

3277 REEVs are BEVs that run on electricity but include an auxiliary power unit known as a 'range extender'.

3278 FCEVs or H_2EVs use electric motors. The electricity is generated in fuel cells and can be stored in a small buffer battery. FCEVs or H_2EVs require hydrogen (compressed into tanks) as fuel.

The products concerned by this chapter are new energy vehicles ('*NEVs*'), a definition developed in China which include (*iii*) PHEVs, (*iv*) BEVs, (*v*) REEVs and (*vi*) FCEVs or H_2EVs[3279].

On the contrary, ICEs are not included because they are motored by the traditional propulsion system. Not even HEVs are included because, in addition to being motored primarily by an internal combustion engine, their electric motor cannot be charged from off-board sources and are therefore unconcerned with most of the issues and needs related to the spread of the electric mobility, like the range limit and the deployment of the charging infrastructure.

The products concerned by this chapter are NEVs of all types and segments. Therefore, this chapter deals not only with passenger cars (including small vans for passengers), but also light commercial vehicles and heavy-duty vehicles, like buses and heavy-duty trucks.

NEV powertrains involve considerably fewer components (around 200) and less labour compared to ICEs' powertrains (around 1 400 components). However, NEVs require more raw materials compared to ICEs. In particular, the most important and expensive cost item in the production of the NEVs is the electric battery. While the weight of the battery in the production cost of a NEV depends on the type of NEV, it generally represents around one third of the production cost[3280], reaching 40% of the production cost of BEVs[3281]. In turn, China has an abundance of essential raw materials used in batteries or easy access to them through other Asian or African countries. Thus, China can use these materials – including lithium, cobalt and nickel – for the production of batteries. Due to their impact on the cost of NEVs, this chapter takes into consideration also Chinese policies regarding batteries for NEVs.

22.2. THE CHINESE NEV AND BATTERY INDUSTRIES

In the past, China did not have the capability to develop the technology for the production of ICEs. From the 1980s, growing demand in China for ICEs was fulfilled at first by imports, mainly from Japan, and then through joint ventures with overseas manufacturers. Whilst this allowed a certain degree of technology transfer into China, the Chinese automobile industry still had no ICE-based intellectual property rights it could exploit, or the access to the global supply chains that underpinned the success of Japanese, Korean, European and US automotive manufacturers.

Due to the lack of access to the ICE technology and to the drivers for its development, China decided to instead focus on the entry into the NEV market in advance compared to foreign automakers and to bet on its major development in the following decades. As described in Section 22.3, already in 2005, the Government started to direct this strategic shift to turn the country's automotive industry into a global powerhouse for the development of NEVs.

22.2.1. PRODUCTION

3279 According to Section 1 of the NEV Plan 2012-2020, as defined below in Section 22.3.4.

3280 International Center for Trade and Sustainable Development ('*ICTSD*') (2017), *International Trade Governance and Sustainable Transports: The Expansion of Electric Vehicles*, Geneva, ICTSD.

3281 See at: https://www.fleetnews.co.uk/electric-fleet/costs-and-incentives/tackling-the-rising-cost-of-electric-vehicle-batteries (accessed on 12 June 2023).

At least since 2015, China has been the largest producer of NEVs in the world[3282].

In 2020, 1 366 000 NEVs were produced in China and in 2021 this figure increased to 3 545 000 NEVs. In 2022, China produced 7 058 000 NEVs, representing an increase of 99% as compared to 2021[3283]. In the first half of 2023, China produced 3 788 000 NEVs[3284].

Broadening the view to the sales of NEVs, in 2015, Chinese brands accounted for 35% of global NEV sales[3285]. In 2022, this share increased to 45%[3286]. However, when considering the sales of NEVs in China, irrespective of whether made by Chinese brands or by foreign brands established in China, the share of the Chinese market increased even more: in 2022 the Chinese market accounted for around 60% of the global NEV market[3287], with 6.9 million NEVs sold in China[3288], compared to 2.6 million NEVs in the EU and less than 1 million in the USA[3289]. In the first half of 2023, sales of NEVs in China reached 3.8 million units[3290]. This share is in stark contrast with the 15% share of the global market that Chinese carmakers hold when considering the sales of both NEVs and ICEs in the passenger car segment.

With respect to the production of batteries, in 2022 China achieved a production of 545.9 GWh[3291]. 1 GWh of batteries can be installed on at least 13 000 NEVs[3292]. Chinese producers were responsible for 56% of the sales in the global market of batteries for NEVs in 2022[3293].

22.2.2. MANUFACTURERS

There are around 300 NEV producers in China[3294]. This figure is subject to fluctuation for two reasons. First, the NEV market relies on innovative technologies and is therefore still dynamic. Indeed, NEV manufacturers in China include both *(i)* subsidiaries or JVs with local manufacturers of US, EU and Japanese brands, and *(ii)* Chinese brands, which are, in turn, either (a) self-standing companies, or (b) specialised business units of wider groups. While the subsidiaries or JVs of foreign manufacturers, once set up, tend to have a continuous production, Chinese brands include, besides established traditional automakers, also short-lived start-ups and industrial experiments of wider groups attracted by the innovative market, which may stop

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3282 Chapter I, Section 2 of the New Energy Vehicle Industry Development Plan (2021-2035), see Section 22.3.13.

3283 See at: http://en.caam.org.cn/Index/show/catid/59/id/1890.html (accessed on 12 June 2023).

3284 See at: http://en.caam.org.cn/Index/show/catid/65/id/2033.html (accessed on 12 June 2023).

3285 See at: https://www.iea.org/reports/global-ev-outlook-2023/corporate-strategy (accessed on 12 June 2023).

3286 See at: https://www.iea.org/reports/global-ev-outlook-2023/corporate-strategy (accessed on 12 June 2023).

3287 See at: https://iea.blob.core.windows.net/assets/dacf14d2-eabc-498a-8263-9f97fd5dc327/GEVO2023.pdf (accessed on 12 June 2023).

3288 See at: http://en.caam.org.cn/Index/show/catid/60/id/1902.html (accessed on 12 June 2023).

3289 See at: https://www.ft.com/content/34c6c191-a803-495a-938d-e1328d53d77c (accessed on 12 June 2023).

3290 See at. http://en.caam.org.cn/Index/show/catid/66/id/2045.html (accessed on 12 June 2023).

3291 According to data from the China Alliance for Electric Vehicles, reported in: https://thechinaproject.com/2023/06/20/china-now-has-a-lot-more-batteries-than-electric-vehicles/#:~:text=In%202022%2C%20a%20battery%20shortage,GWh%20were%20installed%20in%20EVs. and https://equalocean.com/analysis/2023021519466 (accessed on 12 June 2023).

3292 See at: https://www.scmp.com/business/china-business/article/3230673/chinese-ev-battery-maker-adds-overcapacity-fears-plan-us139-billion-plant-jiangxi (accessed on 12 June 2023).

3293 See at: https://www.visualcapitalist.com/the-top-10-ev-battery-manufacturers-in-2022/ (accessed on 12 June 2023).

3294 See at: https://www.economist.com/special-report/2023/04/14/cars-with-chinese-characteristics (accessed on 13 June 2023).

production soon after their inception. Second, the Government is engaged in an effort of consolidation of the NEV market, encouraging NEV producers to merge, thus reducing their number, in order to create larger NEV producers[3295]. For this reason, there is not a complete list of NEV producers in China. This section includes below an overview of the main NEV producers.

Amongst the main NEV producers, in 2022, the top selling NEV producer in the world was the Chinese brand BYD Auto Co., Ltd. ('*BYD*'), with a market share of 18% of the global NEV market. It was followed by Tesla, a US producer with NEV production also in China, with a 13% market share in the global NEV market. Down the ranking, in fourth place, the Chinese brand Zhejiang Geely Holding (Group) Co., Ltd. ('*Geely*') held a 6% market share[3296].

The largest NEV producers in China include also two groups of companies, dubbed the 'Big Four' and the 'Four Dragons' respectively. The 'Big Four' are four State-owned traditional automakers – *(i)* SAIC Motor Corporation Ltd. ('*SAIC*'), *(ii)* Dongfeng Motor Corporation Ltd. ('*Dongfeng*'), *(iii)* China FAW Corporation Ltd. ('*FAW Group*'), and *(iv)* Chang'an Automobile Co., Ltd. ('*Chang'an*') – which are transitioning to various extent from the production of ICEs to NEVs. The 'Four Dragons' include the four largest companies established as NEV producers in the last decade: *(i)* Nio Inc. ('*NIO*'), *(ii)* WM Motor Technology Group Co., Ltd. ('*WM Motor*'), *(iii)* Byton Ltd. ('*Byton*'), and *(iv)* Guangzhou Xiaopeng Motors Technology Co., Ltd. ('*Xpeng*'). However, in 2021 Byton suspended operations due to financial difficulties[3297] and its role in the 'Four Dragons' has been taken by Li Auto Inc. ('*Li Auto*').

Finally, other large Chinese traditional automakers which leveraged their presence in the ICE market to become important players in the Chinese NEV market are: Chery Automobile Co., Ltd. ('*Chery*'), Great Wall Motors Co., Ltd. ('*GWM*'), Guangzhou Automobile Group Motor Co., Ltd. ('*GAC*') and Wuling Motors Holdings Ltd. ('*Wuling*').

The main Chinese manufacturers of batteries for NEVs are also listed in the overview of the main NEV and battery manufacturers below. Indeed, some NEV producers are also battery manufacturers and are therefore vertically integrated, notably BYD. Instead, the largest non-integrated players in the Chinese battery production are Contemporary Amperex Technology Ltd. ('*CATL*'), China Aviation Lithium Battery Technology Group Ltd. ('*CALB*') and Ganfeng Lithium Co., Ltd. ('*Ganfeng Lithium*'), also known as Guoxuan. Overall, there are around 50 NEV battery producers in China.[3298]

Chinese brands[3299]

- Aiways Automobile Co., Ltd. ('*Aiways*')

3295 See Section 2(2) of the 2017 Automobile Plan, as defined in Section 22.3.8, and Chapter VIII, Section 1 of the NEV Plan 2021-2035, as defined in Section 22.3.13.

3296 See at: https://www.iea.org/reports/global-ev-outlook-2023/corporate-strategy (accessed on 13 June 2023).

3297 See at: https://asia.nikkei.com/Business/China-tech/Apple-supplier-Foxconn-s-EV-project-with-China-s-Byton-halted (accessed on 13 June 2023).

3298 See at: https://www.scmp.com/business/china-business/article/3228224/overcapacity-chinas-ev-battery-industry-reach-four-times-demand-2025-putting-small-players-risk (accessed on 13 June 2023).

3299 Where not indicated otherwise, basic information on Chinese manufacturers were retrieved at: https://thechinaproject.com/2021/04/20/all-the-electric-car-companies-in-china-a-guide-to-the-27-top-players-in-the-chinese-ev-industry/ (accessed on 13 June 2023).

Aiways is a pure NEV manufacturer with headquarters in Shanghai. It also produces batteries.

- Alibaba Group Holding Ltd. (*'Alibaba'*)
  Alibaba is active in the Chinese NEV market through its joint venture Zhiji Motors, also known by its English name IM Motors, together with SAIC.
- BAIC Motor Corporation Ltd. (*'BAIC Motor'*)
  BAIC Motor is a traditional auto maker with headquarters in Beijing. BAIC Motor is part of the BAIC Group and is controlled by the Beijing municipality. It is active in the manufacturing of NEVs through the JV Beijing Electric Vehicle with Daimler, under the brand Arcfox. It also has a second JV with Didi Chuxing in the sector. In addition, it has a JV with Hyundai and the JV Beijing Benz with Mercedes-Benz, not active in the NEV market.
- Shenyang Jinbei Automotive Company Ltd. (*'Brilliance'*)
  Brilliance is one of the leading State-owned[3300] Chinese automakers, with headquarters in Shenyang. Originally named Brilliance Auto Group Holdings Co. Ltd., in 2020 Brilliance went bankrupt and took the current company name after that in 2023 the city of Shenyang took over the control of the ailing company[3301]. Besides its own production of NEVs, Brilliance has the JV BMW Brilliance Automotive Ltd. (*'BMW Brilliance Automotive'*) with BMW, which produces also NEVs under the BMW brand. It used to have also the JV Renault Brilliance Jinbei Automotive with Renault, which however filed for bankruptcy in 2021[3302].
- BYD
  BYD is a NEV producer with headquarters in Shenzhen, in the Guangdong province. It is referred to also with the full name Build Your Dreams. It is part of the Chinese multinational BYD Company Ltd. The US company Berkshire Hathaway owns a stake of approx. 15% in BYD. In 2021 it reached a total turnover of RMB 211 billion (EUR 27,68 billion)[3303].
  The NEV business unit was born in 2002 from the acquisition of Tsinchuan Automobile, then the sixth-largest car manufacturer in China by sales volume. Aside from its own NEVs, BYD also supplies other NEV manufacturers, including the FAW Group. In April 2020, BYD and Toyota announced a joint partnership in a new company – BYD Toyota EV Technology – that would research and manufacture NEVs for the Chinese market.
- Byton
  Byton was a NEV manufacturer with headquarters in Nanjing. It was formerly known as Future Mobility. As mentioned above, in 2021 it suspended its operations. Shareholders

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3300 See at: https://www.cnev.cn/shop/1047589/ (accessed on 12 June 2023).

3301 See at: https://www.bloomberg.com/news/articles/2023-04-21/china-s-shenyang-is-said-to-mull-buying-brilliance-china-stake#xj4y7vzkg (accessed on 13 June 2023).

3302 See at: https://www.yicaiglobal.com/news/renault-china-jv-with-brilliance-auto-goes-bust (accessed on 12 June 2023).

3303 BYD Company Limited – 2021 Annual Results Announcement, p. 2. EUR/RMB exchange applied for 2021 in this chapter: 7.6343, sources: European Central Bank, European Commission – DG Budget, Pacific Exchange Rate Service.

included the FAW Group, the Nanjing city government[3304] and Taiwanese company Foxconn.

- Chang'an
  Chang'an – one of the largest State-owned automakers – started producing NEVs under the brand Oshan and through its subsidiary Avatr Technology. Avatr Technology was initially established as Chang'an NIO, a JV with NIO, but later NIO reduced its interest and Chang'an NIO was rebranded as Avatr Technology with the entry in the share capital of CATL and Huawei. Chang'an has also JVs with Ford and Mazda for the production of ICEs. It used to have a JV with the PSA Group, now part of the Stellantis Group, for the production of ICEs under the DS brand, but the JV ceased its operations in 2019.
- Chery
  Chery is a State-owned traditional automaker which transitioned to NEVs, with headquarters in the Anhui province.
- Zhejiang Dianka Automobile Technology Co. Ltd. (*'Dianka'*)
  Dianka is a NEV producers with headquarters in the Zheijiang province. It used to market NEVs under the brand DearCC, but since 2018 it sells them under the Enovate brand.
- Dongfeng
  Dongfeng is a State-owned company[3305] involved in the production of NEVs through the brand Skio and through JVs with foreign brands such as Renault and Nissan. Dongfeng has also a JV with Honda and used to have the JV Dongfeng Peugeot-Citroën Automobiles with the PSA Group, now part of the Stellantis Group, which are not involved in the production of NEVs. In 2022, the Stellantis Group sold its interest in the JV to Dongfeng[3306].
- Evergrande New Energy Vehicles
  Evergrande New Energy Vehicles is a branch of the Evergrande conglomerate. It has production facilities in Shanghai and in Guangzhou, in the Guangdong province. Evergrande New Energy Vehicle was also the parent company of NEVS AB, a Swedish NEV producer which had purchased the assets of Saab Automobile and which stopped production in 2023[3307]. Following the default of the Evergrande conglomerate, Evergrande New Energy Vehicles was, as of writing of this Report, to issue new shares to pay off loans which would dilute the stake of Evergrande in its NEV subsidiary down to 46,86%[3308].
- FAW Group
  FAW Group is headquartered in Changchun, in the Jilin province. It is referred to also with the full name First Automotive Works. It is State-owned[3309]. It started producing

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3304 See at: https://asia.nikkei.com/Business/Business-Spotlight/China-s-local-governments-ride-to-the-rescue-of-EV-startups (accessed on 13 June 2023).

3305 See at: https://www.dfmc.com.cn/news/guoziyaowen.html (accessed on 13 June 2023).

3306 See at: https://asia.nikkei.com/Business/Automobiles/Stellantis-begins-reset-of-joint-venture-with-China-s-Dongfeng (accessed on 13 June 2023).

3307 See at: https://www.carscoops.com/2023/03/saabs-ghost-comes-back-to-haunt-once-again-as-nevs-goes-into-hibernation-mode/ (accessed on 13 June 2023).

3308 See at: https://www.reuters.com/business/autos-transportation/evergrande-ev-unit-issue-fresh-shares-bolster-restructuring-plans-2023-08-14/ (accessed on 13 June 2023).

3309 See at: http://www.faw.com.cn/fawcn/373692/jtgl/jtjj42/index.html (accessed on 13 June 2023).

NEVs under the luxury brand Hongqi and under the JV FAW-Volkswagen Automobile Co., Ltd. ('*FAW-VW*') with Volkswagen and Audi.

- GAC
  GAC is owned by the city of Guangzhou. It has a NEV subsidiary called Guangzhou New Energy Automobile which produces NEVs under the brand Aion. GAC has a number of JVs with foreign brands, which do not produce NEVs in China: Honda, Toyota, Mitsubishi and Isuzu. It also used to have a JV with Fiat Chrysler, a subsidiary of the Stellantis Group, which filed for bankruptcy in 2022[3310].
- Geely
  Geely is one of the largest Chinese traditional automakers, which recently started transitioning from ICEs to NEVs, with headquarters in Hangzhou, in the Zhejiang province. In 2010 Geely acquired Volvo Car AB ('*Volvo*') and in 2013 the production business of the London Taxi Company, rebranded London EV Company Ltd. ('*LEVC*'). Thus, Geely is active in the NEV market also with the brands Volvo, LEVC, Geometry, Lynk & Co, Zeekr and Polestar. In particular, NEVs under the Volvo brand are produced in China by the JV Daqing Volvo Car Manufacturing Co., Ltd. established between Geely and its subsidiary Volvo. Moreover, as of July 2023, Geely set up a new JV with Renault also for the production of motors for HEVs and PHEVs[3311].
- GWM
  GWM is a traditional automaker which entered the NEV market, with headquarters in Baoding, in the Hebei province. It has a JV with BMW to produce NEVs under the brand Mini[3312]. GWM markets NEVs also under the Link Tour brand, as part of the JV Link Tour Automobile Co., Ltd. ('*Link Tour*'), formerly known as Hebei Yogomo Vehicle Co., Ltd. ('*Yogomo*')[3313].
- Hozon New Energy Automobile Co., Ltd. ('*Hozon Auto*')
  Hozon Auto is a NEV producer with headquarters in Shanghai. In 2022, it started exporting to Thailand and it has now covered ASEAN, South Asia and Middle East markets, with a view to enter the European markets[3314].
- Human Horizons (Shanghai) New Energy Powertrain Technology Co., Ltd. ('*Human Horizons*')
  Human Horizons is a producer focused on high-end NEV models, with headquarters in Shanghai. It is part of a group of companies focusing on technology and connectivity.
- Anhui Jianghuai Automobile Co., Ltd. ('*JAC Motors*')

3310 See at: https://www.reuters.com/business/autos-transportation/stellantis-chinas-gac-joint-venture-file-bankruptcy-2022-10-31/ (accessed on 13 June 2023).

3311 See at: https://media.renaultgroup.com/renault-group-and-geely-sign-joint-venture-agreement-to-launch-leading-powertrain-technology-company/ (accessed on 13 June 2023).

3312 See at: https://www.press.bmwgroup.com/global/article/detail/T0282977EN/bmw-group-and-great-wall-motor-sign-joint-venture-agreement-for-mini-electric-vehicles-in-china?language=en (accessed on 13 June 2023).

3313 See at: https://gasgoo66.wordpress.com/2018/07/24/yogomo-changes-name-as-link-tour-to-target-new-energy-pvs/ (accessed on 13 June 2023).

3314 See at: https://www.chinadaily.com.cn/a/202303/22/WS641a65aca31057c47ebb5dc8.html (accessed on 13 June 2023).

JAC Motors is a State-owned traditional automaker which is transitioning to NEVs[3315].

- Li Auto Inc.
  Li Auto is a NEV producer with headquarters in Beijing. It was formerly known as CHJ Automotive. Shareholders include the cities of Changzhou and Xiamen, the State-run investment bank China International Capital Corporation[3316] and the online platforms Meituan and ByteDance. It is specialised in the production of PHEVs.
- Nanjing Golden Dragon Bus Co., Ltd. (*'NGDB'*)
  NGDB is a traditional bus manufacturer which transitioned to NEVs of different categories, including passenger cars. It is active in the NEV market under the Skywell brand, through its subsidiary Skywell New Energy Automobile Group Co., Ltd., and the Kaiwo brand, through its subsidiary Kaiwo New Energy Automobile Group Co., Ltd. (*'Kaiwo'*).
- NIO
  NIO is a NEV producer which initially had its headquarters in Shanghai, latermoved to Hefei, in the Anhui province. Shareholders in the company include the Hefei city government through various entities, Tencent as a second-largest shareholder, Baidu, funds managed by Sequoia China[3317] and funds managed by private equity Warburg Pincus[3318]. In 2021, it reached a total turnover of RMB 36,13 billion (EUR 4,73 billion)[3319]. NIO is also active in the Chinese NEV market through its related company NIO NextEV Ltd. In 2020, NIO – which was experiencing a financial reverse – reached an agreement with the Hefei city government whereby the latter would have invested in the company, reaching a 24,1% stake through various entities, and in exchange NIO would have moved its headquarters to Hefei from Shanghai[3320].
- SAIC
  SAIC is one of the largest State-owned Chinese traditional automakers, which recently transitioned from ICEs to NEVs. It is also referred to with the full name Shanghai Automobile Industry Corporation. Its headquarters are in Shanghai. In 2021, it reached a total turnover of RMB 779,85 billion (EUR 102,15 billion)[3321]. It is active in the NEV market also as part of the JVs SAIC-Volkswagen, SAIC-GM, SAIC-GM-Wuling, and Zhiji Motors, also known with its English name IM Motors, together with online platform Alibaba. In the wider automobile market, SAIC is the parent company of the British brand MG Motor, acquired in 2005[3322], which together with the brand Roewe constitutes the SAIC Passenger Vehicle branch. This branch is an organisational unit within SAIC, as opposed to the JVs which are separate legal entities.

3315 See JAC Motors' website at: https://www.jac.com.cn/ (accessed on 13 June 2023).
3316 See at: https://asia.nikkei.com/Business/Business-Spotlight/China-s-local-governments-ride-to-the-rescue-of-EV-startups (accessed on 13 June 2023).
3317 See at: https://www.sequoiacap.cn/en/companies/nio/ (accessed on 13 June 2023).
3318 See at: https://www.reuters.com/article/us-warburg-pincus-china-fund-idUSKCN1T70L8 (accessed on 13 June 2023).
3319 Nio Inc. - Annual Report pursuant to Section 13 or 15(D) of the Securities Exchange Act Of 1934, p. 11.
3320 See at: https://www.nio.com/news/nio-enters-definitive-agreements-establishing-nio-chinas-headquarters-hefei (accessed on 13 June 2023).
3321 SAIC Motor Corporation Limited - Annual Report 2021, p. 7.
3322 See at: https://www.mgmotor.eu/about (accessed on 13 June 2023).

- China National Heavy Duty Truck Group Co., Ltd. (*'Sinotruck'*)
  Sinotruck is the main Chinese producer of heavy-duty vehicles and is transitioning to NEVs[3323].
- WM Motor
  WM Motor is a NEV producer with headquarters in Shanghai, established in 2015 by a former executive of Geely and of Volvo, and by former executives of SAIC. Shareholders include State-owned investors (notably a 5,7% stake of the city of Kunshan[3324] and funds of the Hubei province, of the Shanghai municipality and of the cities of Suzhou, Hengyang, Hefei and Guangzhou[3325]), SAIC[3326], the tech companies Baidu and Tencent, and funds managed by Susquehanna International Group[3327] and Sequoia China[3328]. Weltmeister is the brand under which NEVs produced by WM Motor are sold.
- Wuling
  Wuling is a State-backed automaker which produces not only cars but also trucks, buses and autoparts. It is active in the Chinese NEV market through the joint venture SAIC-GM-Wuling, which produces some of China's cheapest NEV model.
- XEV Ltd. (*'XEV'*)
  XEV is a NEV producer incorporated in Hong Kong, which has its production facility in Shanghai. It has become well-known for its leading NEV model called Yoyo, a 2-seat mini-car increasingly used in EU urban contexts.
- Xiaomi
  Xiaomi (see Section 18.8.2.), which was already a shareholder in the NEV producer Xpeng, started its own production of NEVs in 2023.
- Xpeng
  Xpeng is a NEV producer with headquarters in Guangzhou, in the Guangdong province. The online platform Alibaba owns a 14% stake in Xpeng. Other shareholders include the Guangzhou provincial government through a state industrial fund[3329], Xiaomi and funds managed by Sequoia China[3330]. Xpeng drew its employees from many well-known tech giants, including Xiaomi, Tencent, Samsung and Huawei. Their expertise helped Xpeng become competitive in NEV technologies.
- Zhiche Youxing Technology Co., Ltd. (*'Youxing'*)

3323 See Sinotruck's website at: https://www.sinotrukinternational.com/ (accessed on 13 June 2023).

3324 See a: https://asia.nikkei.com/Business/Business-Spotlight/China-s-local-governments-ride-to-the-rescue-of-EV-startups (accessed on 13 June 2023).

3325 See at: https://asia.nikkei.com/Business/Automobiles/Chinese-EV-startup-WM-Motor-raises-1.5bn-in-biggest-funding-round (accessed on 13 June 2023).

3326 *Ibid.*

3327 *Ibid.*

3328 See at: https://www.chinamoneynetwork.com/2017/12/22/tencent-sequoia-china-invest-chinese-ev-firm-wm-motor-duo-backed-rival-nio (accessed on 12 June 2023).

3329 See at: https://www.businesswire.com/news/home/20210315005543/en/XPeng-and-Guangdong-Provincial-Investment-Arm-Ink-Strategic-Agreement (accessed on 12 June 2023).

3330 See at: https://www.sequoiacap.cn/en/companies/xpeng/ (accessed on 13 June 2023).

Youxing is active as a NEV producer through its brand Singulato Motors. In 2021, Singulato Motors was reported to have found itself in judicial difficulties[3331]. As of writing this Report, it was unclear if it was still active.

- Zotye International Automobile Trading Co. Ltd. (*'Zotye'*)

  Zotye is known for producing Western and luxury look-alike cars, including NEVs. Its headquarters are in Yongkang, in the Zheijiang province.

Foreign brands[3332]

- BMW
  BMW is active in the NEV market in China through its joint venture BMW Brilliance Automotive with Brilliance under the BMW brand and with GWM under the Mini brand.
- General Motors (*'GM'*)
  GM is active in the Chinese NEV market through the JVs SAIC-GM and SAIC-GM-Wuling.
- Nissan
  Nissan is active in the production of NEVs in China through its JV with Dongfeng.
- Renault
  Renault is active in the production of NEVs in China through its JV with Dongfeng. Moreover, it has a JV with Geely for the production of motors, including motors for HEVs and PHEVs[3333]. It used to have a JV for the production of NEVs with Brilliance, which filed for bankruptcy in 2021[3334].
- Tesla
  Tesla produces NEVs in China in a gigafactory in Shanghai. Tesla is the only foreign company which was granted a waiver to own 100% of an EV factory in China[3335].
- Toyota
  Toyota is active as a NEV manufacturer in the Chinese market through BYD Toyota EV Technology, a JV with BYD.
- Volkswagen
  Volkswagen is active in the Chinese market through the JVs SAIC-Volkswagen and FAW-VW. SAIC-Volkswagen is established in Shanghai and sells cars, including NEVs, under the Volkswagen and Skoda brands. FAW-VW, in which Audi – a wholly-owned subsidiary of Volkswagen – has also a 10% stake, produces also NEVs. Volkswagen is

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3331 See at: https://www.yicaiglobal.com/news/china-bans-ev-startup-singulato-motors-its-founder-from-high-level-consumption (accessed on 12 June 2023).

3332 Where not indicated otherwise, basic information on Foreign brands active as NEV producers in China were retrieved at: https://thechinaproject.com/2021/04/20/all-the-electric-car-companies-in-china-a-guide-to-the-27-top-players-in-the-chinese-ev-industry/ (accessed on 12 June 2023).

3333 See at: https://media.renaultgroup.com/renault-group-and-geely-sign-joint-venture-agreement-to-launch-leading-powertrain-technology-company/ (accessed on 12 June 2023).

3334 See at: https://www.yicaiglobal.com/news/renault-china-jv-with-brilliance-auto-goes-bust (accessed on 13 June 2023).

3335 See at: https://www.reuters.com/business/autos-transportation/stellantis-chinas-gac-joint-venture-file-bankruptcy-2022-10-31/ (accessed on 12 June 2023).

also active in the production of batteries for NEVs in China, as it is the biggest shareholder of Gotion High-tech Co., Ltd. (*'Gotion High-tech'*).

Battery manufacturers

- A123 Systems LLC. (*'A123 Systems'*)
  A123 Systems is a US-incorporated company which was acquired by the Chinese Wanxiang Group Holdings, with headquarters in Hangzhou. It produces lithium iron phosphate batteries and energy storage systems. It has a joint venture with SAIC for the production of batteries for NEVs in China.
- Aiways
  Aiways is a vertically integrated manufacturer, as it produces batteries, in addition to NEVs.
- BYD
  BYD manufactures also batteries, in addition to NEVs. It is the second-largest battery producer in the world and in China, in both cases after CATL, with a market share in the global market of batteries for NEVs of 6,9% in 2021 and 12% in 2022, when it overtook an established player, Panasonic[3336]. As of 2023, in China it held a market share of 23,16%[3337]. Thus, it is the main vertically integrated NEV manufacturer.
- CALB
  CALB is a State-owned company initially established by Aviation Industry Corporation of China Ltd. It held a market share of 2,7% in 2021 and 4% in 2022 in the global market of batteries for NEVs[3338].
- CATL
  As of writing of this Report, CATL is the largest manufacturer of batteries for NEVs in the world and in China. CATL is also known in Chinese by the name The Age of Ningde, as it is headquarterd in Ningde, in the Fujian province. It held a market share of 32,5% in 2021 and 34% in 2022 in the global market of batteries for NEVs[3339]. As of 2023, in China it held a market share of 47,76%[3340]. It has the JV CATL-Geely Power Battery Co. together with Geely[3341] and two JVs with SAIC (United Auto Battery System Co., Ltd. and United Auto Battery Co., Ltd.) for the production of batteries for NEVs[3342]. In addition, it supplies batteries to Tesla, Volkswagen, BMW and NIO[3343]. CATL opened a plant in Germany and was, as of writing of this Report, about to open another plant in Hungary, the only two production sites outside China[3344]. It also signed a deal in February

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3336 See at: https://www.visualcapitalist.com/the-top-10-ev-battery-manufacturers-in-2022/ (accessed on 13 June 2023).
3337 See at: https://www.ft.com/content/34c6c191-a803-495a-938d-e1328d53d77c (accessed on 13 June 2023).
3338 See at: https://www.visualcapitalist.com/the-top-10-ev-battery-manufacturers-in-2022/ (accessed on 13 June 2023).
3339 *Ibid.*
3340 See at: https://www.ft.com/content/34c6c191-a803-495a-938d-e1328d53d77c (accessed on 13 June 2023).
3341 CATL's 2020 annual report, p. 170.
3342 See at: https://www.saicmotor.com/english/latest_news/saic_motor/49664.shtml (accessed on 13 June 2023).
3343 See at: https://europe.autonews.com/suppliers/catls-1000-km-battery-picked-2-chinese-ev-startups (accessed on 13 June 2023).
3344 See at: https://www.catl.com/en/about/profile/ (accessed on 13 June 2023).

2023 with Ford to license its battery technology for use in Ford's US factory in Michigan[3345].

- EVE Energy Co., Ltd. (*'EVE Energy'*)
  EVE Energy produces both lithium batteries and batteries for consumer electronics.
- Ganfeng Lithium
  Ganfeng Lithium is a vertically integrated lithium manufacturer, which produces also batteries.
- Geely
  Geely is active in the production of batteries through its JV CATL-Geely Power Battery Co. with CATL.
- Gotion High-tech
  Gotion High-tech, previously knows as Dongyuan Electric Appliance Group, focuses on lithium iron phosphate batteries. Volkswagen is its biggest shareholder with a 26,47% stake. It held a market share of 2,0% in 2021 and 3% in 2022 in the global market of batteries for NEVs[3346].
- NIO
  While NIO is not a producer of batteries in itself, it has developed a network of public stations where users can swap used batteries for fully charged ones. This also allows for the NEVs to be sold at a lower price, not including the price of the battery[3347]. Moreover, it has opened a plant in Hungary of its subsidiary in charge of the deployment of its swapping infrastructure in the EU, in support of its EU sales[3348].
- SAIC
  SAIC is active in the production of batteries through a JV with A123 Systems and two JVs with CATL (United Auto Battery System Co., Ltd. and United Auto Battery Co., Ltd.)[3349].
- Sunwoda Electronic Co., Ltd. (*'Sunwoda'*)
  Sunwoda held a market share of 2% in 2022 in the global market of batteries for NEVs[3350].
- SVOLT Energy Technology Co., Ltd. (*'SVOLT'*)
  SVOLT held a market share of 1% in 2022 in the global market of batteries for NEVs[3351].

22.2.3. Exports and Imports

In 2023, China became the largest automobile exporting country[3352]. In particular, concerning only NEVs, in the first half of 2023 China exported 534 000 NEVs, an increase by 160%

3345 See at: https://www.ft.com/content/9f411244-eb72-493f-86d2-e7bf77de757e (accessed on 13 June 2023).
3346 See at: https://www.visualcapitalist.com/the-top-10-ev-battery-manufacturers-in-2022/ (accessed on 13 June 2023).
3347 See at: https://www.reuters.com/business/autos-transportation/chinas-nio-opens-trial-high-speed-ev-battery-swapping-stations-2023-03-28/ (accessed on 13 June 2023).
3348 See at: https://www.nio.cn/news/20220801001 (accessed on 13 June 2023).
3349 See at: https://www.saicmotor.com/english/latest_news/saic_motor/49664.shtml (accessed on 13 June 2023).
3350 See at: https://www.visualcapitalist.com/the-top-10-ev-battery-manufacturers-in-2022/ (accessed on 13 June 2023).
3351 *Ibid.*
3352 See at: https://www.bbc.com/news/business-65643064 (accessed on 13 June 2023).

compared to the same period in 2022[3353]. Chinese share of global exports of NEVs grew from 9,9% in 2020 to 35% in 2022[3354], to more than 60% in the first semester of 2023[3355]. SAIC, BYD and Tesla are the top Chinese exporters of NEVs[3356].

In particular, the share of NEVs in the Chinese automobile export mix rose by more than 90%, compared to 2022. This allowed China between 2022 and 2023 to become, for the first time, an exporter rather than an importer of automobiles, as it had been so far due to the technology and know-how disadvantage in the production of ICEs[3357].

The Government is encouraging Chinese NEV brands to explore markets overseas and has policies in place to support those enterprises in many ways. In this regard, the New Energy Vehicle Industry Development Plan (2021-2035) (see Section 22.3.13) sets five strategic tasks for China's NEV industry for the 15 years it spans: (1) improve capacity for technology innovation; (2) build a NEV industry ecosystem; (3) advance industrial integration and development; (4) build a sound infrastructure system; and (5) increase openness and deepen international cooperation. As concerns the international cooperation, domestic firms were encouraged to make strategic plans for international development, exploit overseas markets, and establish warehouses and post-sale service platforms abroad. It is also emphasized that supporting services for international cooperation such as corporate compliance and legal consulting and test and certification services were to be strengthened. Additionally, task 5 entails China's proactive participating in setting international rules and standards[3358].

The EU market is one of the main export destinations of Chinese NEV brands[3359]. This is shown by the increasing market share of Chinese brands in the EU market. In fact, Chinese NEV brands accounted for 4% of the EU NEV market in 2021, 6% in 2022 and 8% in the first eight months of 2023[3360].

Export strategies to the EU/Europe differ amongst Chinese brands. NIO entered the Norwegian market, where it appears to have more sales than in the EU market, as a preparatory move before obtaining an established presence in the EU market[3361]. BYD plans to supply 100 000 EVs to the German-based car rental company SIXT over six years between 2022 and 2028, as it expands its presence into all major markets of the EU[3362]. Aiways regarded penetration of

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3353 See at: https://english.www.gov.cn/news/202307/21/content_WS64ba4441c6d0868f4e8de048.html (accessed on 13 June 2023).

3354 See at: https://www.iea.org/reports/global-ev-outlook-2023/corporate-strategy (accessed on 13 June 2023).

3355 See at: https://www.globaltimes.cn/page/202308/1295756.shtml (accessed on 13 June 2023).

3356 See at: https://www.bbc.com/news/business-65643064 (accessed on 13 June 2023).

3357 See at: https://www.ft.com/content/fddc1c5b-7494-4f0c-94cd-0409d7e9df70 (accessed on 13 June 2023).

3358 See at: https://theicct.org/wp-content/uploads/2021/12/China-new-vehicle-industrial-dev-plan-jun2021.pdf (accessed on 13 June 2023).

3359 See at: https://insideevs.com/news/629493/china-exports-electric-vehicles-europe-reach-record-levels/ (accessed on 13 June 2023).

3360 See at: https://www.reuters.com/business/autos-transportation/chinas-ev-makers-face-cost-consumer-challenges-conquer-europe-2023-08-18/ (accessed on 13 June 2023).

3361 See at: https://carnewschina.com/2023/02/01/nio-european-sales-12-cars-in-netherlands-3-in-norway-in-january/ (accessed on 13 June 2023).

3362 See at: https://www.byd.com/eu/news-list/BYD-Enters-Major-eMobility-Partnership-with-SIXT (accessed on 13 June 2023).

export markets as a way to overcome the competitive pressure in the Chinese market[3363]. Lynk & Co, a brand part of Geely, offers subscription services of shared NEVs to EU customers[3364]. XEV was born as a Chinese producer of NEVs destined for the EU export market and started selling on the Chinese market only two years after it started selling to the EU[3365].

Conversely, due to the development of its production, China imports under 1% of the NEVs sold in its domestic market[3366].

Concerning the exports of foreign brands active as NEV producers in China, Renault and BMW appear to export NEV produced in China to the EU[3367]. Moreover, Tesla ships NEVs destined for the EU market from its Chinese plant[3368], where at the beginning of 2022 more than half of the production was destined for export[3369]. However, this trade pattern is changing, as the Chinese plant was unable to keep up with orders and in March 2022, Tesla opened a production plant in Germany, which allowed to reduce the production pressure on the Chinese plant, then able to supply more the demand of the Chinese market[3370]. As a result, in the first quarter of 2023, 75% of newly registered Tesla BEVs in Western Europe was produced in Germany, nearly 25% was imported from China and few thousand units were imported from the USA[3371].

Concerning the Chinese export of batteries, in 2022 108.1 GWh of batteries and batteries incorporated in NEVs were exported[3372]. Indeed, batteries are often exported already installed in the NEVs because the export of batteries for NEVs is difficult due to their weight, the fact that they contain hazardous materials and the need for matching with the relevant NEV model[3373]. For these reasons, Chinese producers prefer to establish new production plants abroad. For example, in 2023 Chinese battery producers accounted for 40% of the planned production capacity in Europe, notably with the project of CATL's second European plant in Hungary after the first one in Germany[3374]. Moreover, as of 2023, CATL was the second-largest producer in the EU after LG Energy Solution Ltd., with a 27,47% market share[3375]. Still, China is the world top exporter of batteries, with 56.7 GWh of self-standing batteries exported in the

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3363 See at: https://www.caixinglobal.com/2023-05-26/ev-startup-aiways-fails-to-pay-wages-amid-production-halt-102059051.html (accessed on 13 June 2023).

3364 See at: https://www.octotelematics.com/blog/lynk-co-launches-subscription-service-in-europe/ (accessed on 13 June 2023).

3365 See at: https://carnewschina.com/2023/01/07/xev-yoyo-3d-printed-mini-car-to-launch-in-china-in-the-first-half-of-2023/ (accessed on 13 June 2023).

3366 See at: https://www.iea.org/reports/global-ev-outlook-2023/corporate-strategy (accessed on 13 June 2023).

3367 See at: https://insideevs.com/news/629493/china-exports-electric-vehicles-europe-reach-record-levels/ (accessed on 13 June 2023).

3368 See at: https://insideevs.com/news/629493/china-exports-electric-vehicles-europe-reach-record-levels/ (accessed on 13 June 2023).

3369 See at: https://www.ft.com/content/7c3d6eb3-ca0b-4475-9da5-8e304162791b (accessed on 13 June 2023).

3370 See at: https://edition.cnn.com/2023/07/20/cars/tesla-germany-biggest-car-plant-europe/index.html (accessed on 13 June 2023).

3371 See at: https://www.schmidtmatthias.de/post/tesla-tops-the-west-european-new-bev-passenger-car-market-during-q1-2023 (accessed on 13 June 2023).

3372 See at: https://equalocean.com/analysis/2023021519466 (accessed on 13 June 2023).

3373 See at: https://www.cer.eu/publications/archive/policy-brief/2023/europe-american-chinese-green-tech#:~:text=9%20Total%20EU%20imports%20of,to%20cover%20the%20excess%20demand (accessed on 13 June 2023).

3374 See at: https://equalocean.com/analysis/2023021519466 (accessed on 13 June 2023).

3375 See at: https://www.ft.com/content/34c6c191-a803-495a-938d-e1328d53d77c (accessed on 13 June 2023).

first semester of 2023[3376] – which allows to foresee an increase in exports compared to 2022 – and a share of global exports estimated at 31,1% in 2021[3377] and at 35% in 2022[3378]. Also, in the case of batteries, the EU is one of the main export destinations, accounting for 31,21% of Chinese exports of lithium-ion batteries – the main type used in NEVs – in 2021[3379] and for approximately one third in 2022[3380].

22.2.4. OVERCAPACITY

The rapid growth NEVs production in China highlighted in Section 22.2.1 has already led to a situation of overcapacity. By the end of 2021, the total production capacity of NEVs in China reached 5.69 million NEVs, yet the total production was only 3.55 million NEVs. Despite the overall overcapacity in place, as of 2023, China still had an additional passenger car capacity of 10.46 million vehicles under construction, most of which for manufacturing NEVs[3381]. Once all these factories are operating, China is therefore expected to reach a capacity of 16 million vehicles. While it is true that production of NEVs increased by 99% between 2021 and 2022, in the first half of 2023 it increased by 42,4% compared to the same period in 2022[3382]. It is therefore debatable if China will be able to run NEV production plants at full capacity or if a certain share of the capacity will be likely to remain idle.

For this reason, the Government encourages NEV producers to explore markets overseas and export NEVs, with governmental support for enterprises in place. At the same time, the Government appears to encourage overcapacity to a certain extent. Indeed, the Dual-Credit Policy described in Section 22.3.10 sanctions the failure to reach certain targets measured on the average fuel consumption and on production or import. Since the average fuel consumption depends on the NEVs or other low-emission vehicles produced or imported, the targets are measures on production or imports (essentially production, given how negligible imports are in the Chinese NEV market (see Section 22.2.3)). Therefore, these targets could act as an incentive for producing increasingly more NEVs, not only to meet the targets but also to lower the average fuel consumption. Thus, they could be intended also as factors contributing to the overcapacity of the NEV industry.

3376 See at: https://global.chinadaily.com.cn/a/202307/24/WS64bdc9daa31035260b8180a1.html#:~:text=In%20the%20first%20half%20of%20this%20year%2C%20Chinese%20battery%20companies,2022%20amounted%20to%2068.1%20GWh (accessed on 13 June 2023).

3377 See at: https://oec.world/en/profile/hs/batteries?countryComparisonFlowSelector=Exports&countryComparisonMeasureSelector=Trade%20Value&cumulativeMarketShareSelected=share (accessed on 13 June 2023).

3378 See at: https://iea.blob.core.windows.net/assets/dacf14d2-eabc-498a-8263-9f97fd5dc327/GEVO2023.pdf (accessed on 13 June 2023).

3379 European Parliament (2023), *Global value chains: Potential synergies between external trade policy and internal economic initiatives to address the strategic dependencies of the EU*, Study requested by the INTA committee, EP/EXPO/INTA/FWC/2019-01/LOT5/R/09, p. 45, Table 7.

3380 See at: https://www.cer.eu/publications/archive/policy-brief/2023/europe-american-chinese-green-tech#:~:text=9%20Total%20EU%20imports%20of,to%20cover%20the%20excess%20demand (accessed on 13 June 2023).

3381 See at: http://www.anbound.com/Section/ArticleView_31356_1.htm (accessed on 12 June 2023).

3382 See at: http://en.caam.org.cn/Index/show/catid/65/id/2033.html (accessed on 12 June 2023).

Overcapacity is also a feature of the Chinese battery industry, together with oversupply. In 2022 China's battery production totalled 545.9 GWh, meanwhile the volume installed in NEVs for the domestic market was 294.6 GWh, accounting only for 53,96% of the production. Even adding 108.1 GWh of battery exports and exports of batteries incorporated in the NEVs, the ratio is only 73,77% of the production[3383]. This left more than a quarter of the battery production not used for NEVs. The same pattern appeared to continue in the first half of 2023, when 293.6 GWh were produced but only 152.1 GWh installed in NEVs[3384]. This stockpiled production could theoretically find other applications, as battery cells constituting this volume of production could be assembled in battery module packs for applications other than NEVs. However, even if that were the case, additional capacity can be devoted to the production of batteries for NEVs, as the battery production capacity developed by China is considerable. In fact, in terms of lithium-ion batteries, which is the most used type of battery for NEVs, the production capacity reached 893 GWh in 2022, corresponding to 77% of the global capacity[3385]. Even considering that this capacity was used not only for the lithium-ion batteries in the 545.9 GWh of batteries produced for NEVs, but also for other applications, this figure shows that Chinese producers have idle capacity for batteries for NEVs. Moreover, in perspective, it is foreseen that Chinese battery manufacturers will be able to manufacture 4 800 GWh of batteries in 2025, four times the demand of the country's NEV makers[3386]. Therefore, the battery production capacity in China does not appear to be developed only to supply the domestic demand, but also export markets.

22.3. REGULATORY FRAMEWORK

NEVs have been the subject of Chinese governmental guidelines, both at central and local level, at least since 2005. A number of policy documents and regulatory measures show the increased attention devoted by the Chinese authorities to the development of the production of NEVs and their components, in particular batteries, into a strategic industry. The following policy documents and regulatory measures in relation to NEVs will be analysed in more detail below:

- Decision No. 40 (see Section 4.2.9);
- the 2010 SEI Decision (see also Section 2.3.2.);
- the 2010 Notice on the Pilot Subsidy Scheme for the Private Purchase of New Energy Vehicles;
- the 12th FYP;
- the 2012-2020 Energy-saving and New Energy Vehicle Industry Development Plan;

3383 See at: https://equalocean.com/analysis/2023021519466 and https://thechinaproject.com/2023/06/20/china-now-has-a-lot-more-batteries-than-electric-vehicles/#:~:text=In%202022%2C%20a%20battery%20shortage,GWh%20were%20installed%20in%20EVs (accessed on 12 June 2023).

3384 See at: https://global.chinadaily.com.cn/a/202307/24/WS64bdc9daa31035260b8180a1.html#:~:text=In%20the%20first%20half%20of%20this%20year%2C%20Chinese%20battery%20companies,2022%20amounted%20to%2068.1%20GWh (accessed on 12 June 2023).

3385 See at: https://www.visualcapitalist.com/chinas-dominance-in-battery-manufacturing/ (accessed on 12 June 2023).

3386 See at: https://www.scmp.com/business/china-business/article/3228224/overcapacity-chinas-ev-battery-industry-reach-four-times-demand-2025-putting-small-players-risk (accessed on 12 June 2023).

- the 13th FYP;
- Made in China 2025 (see Section 4.2.3);
- the 2017 Medium and Long-Term Development plan for the Automobile Industry;
- the 2017 Action Plan for Promoting the Development of the Automotive Power Battery Industry;
- the 2017 Dual-Credit Policy;
- the Recommendations for the 14th FYP;
- the 14th FYP (see Section 4.2.5);
- the 2021-2035 New Energy Vehicle Industry Development Plan;
- the 2023 Announcement on the Continuation and Optimization of the New Energy Vehicle Purchase Tax Reduction Policy;
- the 2023 Measures to further promote the automobile consumption and Plans to boost the NEV industry; and
- certain provincial, regional, municipal and local plans of areas where NEV manufacturers are located.

22.3.1. Decision No. 40 and Guiding Catalogues

As recalled in Section 4.2.9, Decision No. 40 was adopted in the context of the 11th FYP. It shows a serious commitment of the Government, as early as 2005, to support the development of new industries fostering the sustainable development, including NEVs.

Indeed, in Chapter II dedicated to '*Directions and Key Points of Industrial Structure Adjustment*', Article 7 states that the Government "*shall* [...] *make great efforts to develop industries in the areas of* [...] *new energy*". Moreover, Article 6 refers to batteries when it states that "[t]*he equipment manufacturing industry shall* [...] *break through especially in the areas such as* [...] *advanced power equipment, energy conservative and consumption reducing equipment*".

Chapter III defines the principles identifying the '*encouraged category*' of industries included in the Guiding Catalogue for Industrial Structure Adjustment, which, as explained in Section 4.2.9, "*is the important basis for guiding investment directions, and for the governments to administer investment projects, to formulate and enforce policies on public finance, taxation, credit, land, import and export, etc.*"[3387] applicable to Chinese companies[3388]. One of the principles is that encouraged industries should meet "*the requirements of the sustainable development strategy*" and should lead "*to the development and utilization of new energy and renewable energy*"[3389].

It is noteworthy that another principle refers to the ability of encouraged industries to allow China to exert its "*comparative advantages, especially the advantages of energy, mineral resources and labour resources*"[3390].

3387 Decision No. 40, Article 12.
3388 Indeed, a different list of encouraged industries applies to foreign investors.
3389 Decision No. 40, Article 14(4).
3390 Decision No. 14, Article 14(5).

Decision No. 40 tasked the NDRC with releasing and updating the Guiding Catalogue. All the four successive versions of the Guiding Catalogue (2005, 2011 – later amended in 2013 –, 2019 and 2023, effective as of 6 February 2024) mentioned NEVs among the encouraged industries. Indeed, already the 2005 version mentioned the "[d]*evelopment and manufacturing of new energy vehicles and key components such as compressed natural gas, hydrogen fuel, synthetic fuel, liquefied petroleum gas, alcohol ether fuel vehicles, hybrid vehicles, electric vehicles, fuel cell vehicles, etc*" as an encouraged industry[3391]. The 2011 version mentioned '*key parts and components*' of NEVs, which included, among others: '*power battery packs*' '*battery cathode material*', '*electric vehicle electronic control integration*' and '*electric vehicle drive motor*'[3392]. The 2013 amendment kept them in the list[3393]. The 2019 version included '*key parts and components*' and '*R&D capacity building*' of NEVs[3394]. The 2024 version refers to '*key parts and components*' (including batteries) and '*R&D and testing capabilities for new energy vehicles*'[3395].

22.3.2. The 2010 State Council Decision on Accelerating the Development of Strategic Emerging Industries

The 2010 SEI Decision (see Section 2.3.2') which lists the industrial sectors to be developed with priority and sets objectives for them, with NEVs included among the initial seven SEIs[3396]. NEVs remained a strategic emerging industry throughout the successive revisions made by the NDRC of the Strategic Emerging Industries Key Product and Services Catalogue in 2013 and 2017.

In the 2010 SEI Decision, the Government sets quantitative objectives: for example, by 2015 the strategic emerging industries were to represent 8% and by 2020 15% of the country's GDP.

22.3.3. The 2010 Notice on the Pilot Subsidy Scheme for the Private Purchase of New Energy Vehicles

In May 2010 the MOF, the Ministry of Science and Technology, the MIIT and the NDRC issued the Notice on the Pilot Subsidy Scheme for the Private Purchase of New Energy Vehicles

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3391 NDRC Order No. 40 of 2005, available at: https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/200512/t20051222_960679.html (accessed on 14 June 2023).

3392 NDRC Order No. 9 of 2011, available at: https://www.ndrc.gov.cn/fggz/cyfz/zcyfz/201104/t20110426_1149263.html (accessed on 14 June 2023).

3393 NDRC Order No. 21 of 2013, available at: https://www.gov.cn/gongbao/content/2013/content_2404709.htm (accessed on 14 June 2023).

3394 NDRC Order No. 29 of 2019, available at: https://www.gov.cn/xinwen/2019-11/06/5449193/files/26c9d25f713f4ed5b8dc51ae40ef37af.pdf; an English translation is available on the website of the Australian trade defence authority: https://www.industry.gov.au/sites/default/files/adc/public-record/exhibit_d16.1_-_catalogue_for_guiding_industry_restructuring_-_en.pdf (accessed on 14 June 2023).

3395 See 2024 Guidance Catalogue for the industrial structure adjustment ; Section I-16 Automobile, available at: P020231229700886191069.pdf (ndrc.gov.cn) (accessed on 15 January 2024).

3396 For wider context of the policies related to SEI sectors, see also Section 4.2.1.

('*Purchase Subsidy Notice*')[3397]. The Purchase Subsidy Notice was meant to encourage the sale of NEVs for personal use by granting consumers a one-off subsidy[3398] for the purchase or the lease of an NEV[3399]. In particular, NEVs concerned included both BEVs and PHEVs[3400]. The subsidy was paid directly to the NEV producer, which could have therefore sold the NEV to the customers at a discounted price[3401]. In order to benefit from the purchase subsidy, the NEV purchased or leased should have fulfilled certain minimum performance and quality requirements[3402]. The amount of the subsidy disbursed depended on the power of the battery, measured in kilowatt hours[3403]. A maximum amount of the individual subsidy was provided, higher for BEVs than for PHEVs[3404].

Originally, the purchase subsidy was set to stop at the end of 2020. However, due to the economic impact of the COVID-19 pandemic, its end was delayed to the end of 2022. Between 2010 and 2020, the sale of 3.17 million NEVs benefitted from the purchase subsidy. Over the years, the purchase subsidy scheme was revised several times, making NEV criteria to award the subsidy more stringent and reducing the individual amount of the subsidy[3405]. The rationale for this was that the subsidy scheme was meant to support the spread of the use of NEVs but, once the general public had become accustomed to them, their sale and spread would have continued thanks to the market development.

This measure had an impact on NEV prices in China. Indeed, thanks to purchase subsidies, NEV prices were suppressed. This is shown by the fact that, once the purchase subsidy was withdrawn, NEV prices immediately increased[3406]. As a consequence, sales of NEVs in January 2023 dropped to a minimum of 408 000 units, signalling a decrease by 49,9% compared to December 2022 and a decrease by 6,3% compared to the same period in 2022[3407].

However, the clear-cut strategy of progressively reducing the purchase subsidies down to their termination does not appear to have been completely followed. Indeed, other measures meant to encourage the sale of NEVs, such as the purchase tax exemption (see Section 22.3.15), had initially the same duration as the purchase subsidies but were continued beyond the end of the purchase subsidy scheme, and measures similar to the purchase subsidy were introduced at the lower administrative levels of government (see Section 22.4.5). This is a sign that as of 2023, the NEV market in China still enjoys economic stimulus pushed by the Government rather than relying solely on market forces.

22.3.4. NEVs IN THE 12th FYP

3397 https://www.ndrc.gov.cn/fggz/hjyzy/jnhnx/201006/t20100603_1134366.html?code=&state=123 (accessed on 14 June 2023).
3398 Article 4, Purchase Subsidy Notice.
3399 Article 5, Purchase Subsidy Notice.
3400 Article 2, Purchase Subsidy Notice.
3401 Article 5, Purchase Subsidy Notice.
3402 Article 8, Purchase Subsidy Notice.
3403 Article 9, Purchase Subsidy Notice.
3404 Article 9, Purchase Subsidy Notice.
3405 See at: https://www.sixthtone.com/news/1012221 (accessed on 14 June 2023).
3406 For example, in January 2023 BYD increased the prices of several models. See at: https://www.sixthtone.com/news/1012221 (accessed on 14 June 2023).
3407 See at: http://en.caam.org.cn/Index/show/catid/66/id/2050.html (accessed on 14 June 2023).

The 12th FYP[3408] mentioned the NEVs in Section 1 of Chapter 10 among the strategic emerging industries that the Government intends to develop[3409]. Specifically, the 12th FYP indicated that the focus of the NEV industry in the 2011-2015 period should have been "*the development of plug-in hybrid electric vehicles, pure electric vehicles and fuel cell automobile technologies*".

22.3.5. THE ENERGY-SAVING AND NEW ENERGY VEHICLE INDUSTRY DEVELOPMENT PLAN (2012-2020)

In the context of the 12th FYP, the State Council issued the Energy-Saving and New Energy Vehicle Industry Development Plan (2012-2020) ('*NEV Plan 2012-2020*')[3410] with the strategic goal of developing energy-saving vehicles (i.e., ICEs with reduced fuel consumption) and NEVs, expressly including BEVs, PHEVs and FCEVs.

Article II(2), listing the basic principles, specified that the NEV Plan 2012-2020 should have employed a "*combination of government guidance and market drive. In the industrial start-up period,* [the Government] *will actively play the role of planning guidance and policy incentives, gather scientific and technological and industrial resources, encourage the development and production of energy-saving and new energy vehicles, and guide market consumption. After entering the mature period of the industry,* [the Government will] *give full play to the driving role of the market in industrial development and the basic role of resource allocation*". The development of the industry was not limited to the NEVs, but also to their components throughout the value chain, including "*power batteries, motors, automotive electronics, advanced internal combustion engines, and high-efficiency transmissions*".

In Article III(2)(1), the NEV Plan 2012-2020 also set specific quantitative objectives:

- by 2015, the production together with the sales of BEVs and PHEVs should have reached 500 000 units[3411]; and
- by 2020 the production capacity of BEVs and PHEVs should have reached 2 000 000 units and their production and sales taken together should have exceeded 5 000 000 units[3412], while FCEVs and H_2EV should have developed following the international trends. It appears that the 2020 objective of NEV production and sale was not reached, as NEV production reached 1 366 000 units and sales 1 367 000 units, their sum thereby having fallen short of the 5 000 000 objective[3413].

3408 Section 4.1 of the 2017 version of this Report.

3409 See: https://www.gov.cn/2011lh/content_1825838_4.htm; an English translation is available at: https://policy.asiapacificenergy.org/sites/default/files/12th%20Five-Year%20Plan%20%282011-2015%29%20for%20National%20Economic%20and%20Social%20Development%20%28EN%29.pdf (accessed on 14 June 2023).

3410 See at: https://www.gov.cn/zwgk/2012-07/09/content_2179032.htm (accessed on 14 June 2023).

3411 The figure of 500,000 units in this objective includes the units produced added to the units sold, double-counting units produced and sold in the same year.

3412 The figure of 5,000,000 units in this objective includes the units produced added to the units sold, double-counting units produced and sold in the same year. This is confirmed by separate data on production and sales of NEVs in 2021, which amounted to 2.6 and 2.5 million units respectively and reached 5.1 million units only by summing them up, see page 21 of the report by Shanxi Securities Co., Ltd. available at: https://dfscdn.dfcfw.com/download/A2_cms_f_20211202113558364819&direct=1&abc1432.pdf (accessed on 14 June 2023).

3413 See at: http://en.caam.org.cn/Index/show/catid/34/id/140.html (accessed on 14 June 2023).

22.3.6. NEVs IN THE 13th FYP

The 13th FYP[3414], in Section 1 of its Chapter 23, renews the commitment of the Government to "*support the development of* [...] *new-energy vehicles*".

In addition, in Section 4 of Chapter 23, the 13th FYP lists the actions meant to support the development of the NEV sector:

- *Promote the use of new-energy vehicles;*
- *Encourage the use of new-energy vehicles for urban public transport and taxi services;*
- *Develop all-electric vehicles and hybrid electric vehicles with a focus on making advancements in key technological areas such as battery energy density and battery temperature adaptability;*
- *Facilitate the development of a network of charging facilities and services that are compatible with each other and come under unified standards;* [...]
- *Ensure the cumulative total production and sales figures for new-energy vehicles in China reach five million;*
- *Strengthen efforts to recover and dispose of used batteries from new-energy vehicles.*

22.3.7. NEVs IN MADE IN CHINA 2025

As explained in Section 4.2.3, Made in China 2025[3415] is a comprehensive long-term programme issued in the context of the 13th FYP and applicable until the end of the 14th FYP. Its main goal is to shift Chinese manufacturing upwards to higher value-added products, emphasizing in particular the use of innovative manufacturing technologies. Indeed, NEVs are among the ten sectors for which Made in China 2025 specified strategic tasks and goals and laid down government support measures.

In relation to NEVs, Made in China 2025 indicates that the Government would:

> *Continue to support the development of electric vehicles and fuel cell vehicles, master the core technologies of low-carbon, informatized, and intelligentized automobiles, improve the engineering and industrialization capabilities of core technologies such as starter batteries, drive motors, high-efficiency internal combustion engines, advanced transmissions, lightweight materials, and intelligent controls, form a complete industrial system and innovation system from key components to complete vehicles, and promote the integration of energy-saving and new energy vehicles with independent brands at internationally advanced levels*[3416].

More specifically, the Government would "[o]*rganize and implement a number of special projects and major projects for innovation and industrialization for* [...] *new energy vehicles* [...]"[3417].

3414 Available at: https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf (accessed on 14 June 2023).

3415 See at: https://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm ; English translation available at: https://cset.georgetown.edu/wp-content/uploads/t0432_made_in_china_2025_EN.pdf (accessed on 14 June 2023).

3416 Section 3(6)(6), Made in China 2025.

3417 Box 5, Section 3(6), Made in China 2025.

To achieve these objectives, the Government commits to "[a]*ctively leverage the advantages of policy finance* [...] *and increase support for key areas such as new generation IT, high-end equipment, and new materials*", as well as to "[s]*upport the Export-Import Bank of China in increasing services for the manufacturing industry to go global within its business scope, encourage China Development Bank to increase loans to manufacturing enterprises, and guide financial institutions to innovate products and services that meet the characteristics of manufacturing enterprises*"[3418].

22.3.8. The 2017 Medium and Long-Term Development plan for the Automobile Industry

In 2017 the State Council approved the Medium and Long-Term Development Plan for the Automobile Industry ('*2017 Automobile Plan*')[3419], which was published by the MIIT, together with the NDRC and the MOST.

In analysing the situation of the automobile industry at the time, the Government acknowledges that one of the issues affecting the sector is *overcapacity*[3420] and that as the sector is undergoing a main transformation '"w]*ith the continuous breakthrough of energy revolution*", an essential objective is "*accelerating towards the direction of new energy*"[3421]. On these grounds, the 2017 Automobile Plan states that "[t]*here is a good foundation and favourable conditions for building a powerful automobile country*" and, in particular, "[n]*ew energy vehicles and intelligent connected vehicles are expected to become breakthroughs*" which would lead the transformation and the upgrade of the industry.

According to the 2017 Automobile Plan, in 2016, China's automobile production and sales exceeded 28 million units, ranking first in the world for 8 consecutive years. While sales of Chinese brand automobiles accounted for about 50% of the total sales[3422], the 2017 Automobile Plan envisages a special "*focus on making Chinese brand cars stronger and bigger*" and on developing a group of companies able to be competitive on the international level[3423].

In terms of future plans, in the 2017 Automobile Plan the Government expects to reach a production of about 30 million of automobiles in 2020 and 35 million in 2025[3424], an industrial development which would also be supported by the '*manufacturing power strategy*' and by the BRI (see Section 4.2.4). It appears that the 2020 objective was not reached, as China produced 25.23 million of automobiles in 2020[3425].

3418 Section 4(3), Made in China 2025.

3419 See at: https://www.most.gov.cn/xxgk/xinxifenlei/fdzdgknr/fgzc/gfxwj/gfxwj2017/201705/t20170517_132856.html (accessed on 14 June 2023).

3420 Section 1(1), 2017 Automobile Plan.

3421 Section 1(2), 2017 Automobile Plan.

3422 Section 1(1), 2017 Automobile Plan.

3423 Section 2(1), 2017 Automobile Plan.

3424 Section 1(3), 2017 Automobile Plan.

3425 According to data of the China Association of Automobile Manufacturers reported in http://en.caam.org.cn/Index/show/catid/27/id/42.html. However, it is unclear if these data include also the production of NEVs. In any case, even summing up the production of NEVs in 2020, reaching 1.37 million units, the objective remains not fulfilled.

In operational terms, the 2017 Automobile Plan is supposed to be "*market-led*" but "*government-driven*", whereby the nominal "*decisive role of the market in resource allocation*" is to be balanced by the "*guiding role of the government in macro-control, improving the legal system* [...] *standardizing the order of industrial development, highlighting the dominant position of enterprises, encouraging mergers and reorganizations, optimizing industrial layout*"[3426].

The objectives of the 2017 Automobile Plan include having *(i)* several Chinese companies among the top ten NEV companies in the world by 2020, *(ii)* several Chinese automobile parts companies having a turnover of RMB 100 billion by 2020, *(iii)* several Chinese companies among the top ten automobile parts companies in the world by 2025, and *(iv)* several Chinese companies among the top ten automobile sellers in the world by 2025. It appears that the 2020 objective of having several Chinese companies among the top ten NEV companies in the world was at least partially fulfilled, as BYD and Geely were respectively the fourth and the fifth NEV producer (on an equal footing with other foreign brands) in the world by market share[3427].

At the international level, the 2017 Automobile Plan aims *(i)* by 2020, to have gradually exported Chinese car brands to developed countries, *(ii)* by 2025, to further enhance the global influence of Chinese car brands, and *(iii)* by 2025, to reduce the energy consumption of NEVs to the world's leading level. The 2020 objective appears to have been partially fulfilled with regard to NEV brands, as in 2020 China held a 10% share of global export of NEVs, almost exclusively directed – among developed countries – to the EU[3428].

The 2017 Automobile Plan covers also batteries. It encourages "*enterprises, institutes, universities and other innovation subjects to allocate innovation resources across the industrial chain, and establish manufacturing innovation centres in the automotive field such as power batteries*"[3429]. The spread of innovation across the value chain, especially in favour of the best performing companies, should be supported by the Joint Fund for the Automobile Industry Innovation and Development ('*Automobile Industry Joint Fund*' – see Section 22.4.5)[3430].

Also, FCEVs are mentioned as an area where R&D must be strengthened[3431], as well as hybrid vehicles and alternative fuel vehicles[3432].

More concretely, the 2017 Automobile Plan outlines the project for the establishment of innovation centers, which will follow the formulation of "*technology roadmaps for* [...] *pure electric vehicles and plug-in hybrid vehicles, hydrogen fuel cell vehicles* [...] *automotive power batteries ... and automobile manufacturing*"[3433]. The establishment of the innovation centres was scheduled to be completed by 2020 and they should have been devoted to innovation in the

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3426 Section 2(2), 2017 Automobile Plan.
3427 See at: https://www.iea.org/reports/global-ev-outlook-2023/corporate-strategy (accessed on 14 June 2023).
3428 See at: https://iea.blob.core.windows.net/assets/dacf14d2-eabc-498a-8263-9f97fd5dc327/GEVO2023.pdf (accessed on 14 June 2023).
3429 Section 3(1), 2017 Automobile Plan.
3430 Section 3(1), 2017 Automobile Plan.
3431 Section 3(1), 2017 Automobile Plan.
3432 Section 3(3)(3), 2017 Automobile Plan.
3433 Column 1, 2017 Automobile Plan.

automotive industry, for example to "*power batteries*" and "*intelligent connected vehicles*"[3434]. By 2025, it was envisaged that the innovation centres would have been instrumental for the development of the industry and would have a strong international competitiveness. In this connection, two innovation centres were indeed established: the China Automotive Battery Research Institute[3435] (which was founded already in 2016, before the issuance of the 2017 Automobile Plan) and the National Innovation Center of Intelligent and Connected Vehicles[3436] as consortias of State entities and NEV producers.

In parallel, the strengthening of manufacturing technologies of key parts such as the "*electric drive system*" is to be encouraged[3437] and the integration and relationship in the production of vehicles and their parts is to be developed by national science and technology plans promoted through special projects and funds[3438]. In this respect, the 2017 Automobile Plan foresees *(i)* by 2020, the creation of a number of Chinese automobile parts companies able to become competitive in key technological fields, and *(ii)* by 2025, the positioning of a number of Chinese automobile parts among the top ten automobile parts companies in the world in terms of production value.

NEVs are considered as a key sector for the industrial transformation and upgrade. The 2017 Automobile Plan provides for an acceleration of the R&D and of the industrialisation of NEV technologies. To this end, "*corporate investment, social capital, and national science and technology plans (special projects, funds, etc.)*" should be used to coordinate and organise companies, universities and scientific research institutes in order to tackle key problems "*focusing on power batteries and battery management systems, motor drives and power electronics assemblies* [...] *innovation chains including technology, fuel cell power system, plug-in/range -extended hybrid power system and pure electric power system*"[3439]. With specific regards to batteries, the 2017 Automobile Plan calls for an implementation of power battery upgrade projects, unleashing the potential of the Power Battery Innovation Centre (set up as the China Automotive Battery Research Institute referred to above) and of the Power Battery Industry Innovation Alliance (i.e., the NEV and battery producers involved in the creation of the Centre)[3440] carrying out joint research on technologies such as "*key materials for power batteries, single batteries, and battery management systems*' and accelerating '*the realization of revolutionary breakthroughs in power batteries*"[3441]. This focus on the development of the battery industry in the 2017 Automobile Plan is part of a wider effort of the Government to foster the development of the automobile power battery value chain, shown also by the 2017 Action Plan for Promoting the Development of the Automotive Power Battery Industry (see Section 22.3.9).

3434 Column 1, 2017 Automobile Plan.
3435 See at: http://www.glabat.com/class/54 (accessed on 14 June 2023).
3436 See at: http://www.china-icv.cn/en/about (accessed on 14 June 2023).
3437 Section 3(2), 2017 Automobile Plan.
3438 Section 3(2), 2017 Automobile Plan.
3439 Section 3(3)(1), 2017 Automobile Plan.
3440 The NEV and battery producers involved in the creation of the Centre are listed here: http://www.glabat.com/class/54 (accessed on 14 June 2023).
3441 Section 3(3)(1), 2017 Automobile Plan.

More generally, the Government intends to "[i]*mprove the support policy system for the promotion and application of new energy vehicles*", fostering the transition from encouraged purchases of NEVs to a use of NEVs which would be cost-effective, to "*establish a long-term mechanism to promote the development of new energy vehicles*" and to "*guide manufacturers to continuously increase the proportion of production and sales of* [NEVs]"[3442].

In terms of specific objectives for NEVs, *(i)* by 2020, (a) annual production and sales of NEVs was supposed to reach 2 million units, (b) the specific energy of the batteries to exceed 300 Wh/kg, aiming at reaching 350 Wh/kg, and (c) the specific energy of the system was to reach 260 Wh/kg, with costs dropping below 1 RMB/Wh, and *(ii)* by 2025, (a) NEVs should account for more than 20% of car production and sales, and (b) the specific energy of the batteries is supposed to reach 350 Wh/kg. It appears that the 2020 objective of NEV production and sale was reached, if the two indicators were considered cumulatively, as NEV production reached 1 366 000 million units and sales 1 367 000 units[3443].

In the 2017 Automobile Plan, the Government further expresses the need for raising awareness for Chinese brands among consumers, based on quality control and brand strategy[3444]. In this endeavour, the role of the Government consists in guiding industry organisations to establish a quality brand evaluation system and to "*actively promote the construction of a new international order for auto brand evaluation*". It is noteworthy that the Government promises also to support profitable companies "*in the acquisition and operation management of internationally renowned brands*" and its strategy to build leading companies entails also supporting profitable companies in order "*to grow bigger and stronger, become a leading automobile enterprise with strong international competitiveness*"[3445]. Beyond car producers, the Government intends to support also the growth of automobile parts, maintenance and consulting services companies with technological innovation capacities in order to develop them into '*little giants*' (see Section 2.3.2)[3446].

This Government's strategy for the automotive sector fits in the wider Chinese 'go out' policy and the Belt and Road Initiative. Indeed, the 2017 Automobile Plan invites car companies to adopt a "*strategic concept of international development*" and to outline an "*international development strategy*"[3447]. In particular, car manufacturing companies cooperating with car parts manufacturing companies would qualify for governmental support to identify "*key development areas to build automobile industrial parks*" and for support related to establishing '*overseas development alliances*"[3448]. Furthermore, the Government is intent on promoting the setting up by car manufacturing companies of "*overseas development funds for the automobile industry*" and it correspondingly encourages banking institutions to establish a "*credit management and loan review system suitable for the overseas development of automobile companies*" and "*a multi-level overseas investment guarantee system for the automobile*

3442 Section 3(3)(1), 2017 Automobile Plan.
3443 See at: http://en.caam.org.cn/Index/show/catid/34/id/140.html (accessed on 14 June 2023).
3444 Section 5(1)-(2), 2017 Automobile Plan.
3445 Section 5(4), 2017 Automobile Plan.
3446 Section 3(5)(4), 2017 Automobile Plan.
3447 Section 6(1), 2017 Automobile Plan.
3448 Section 6(2), 2017 Automobile Plan.

industry". Concretely, the 2017 Automobile Plan calls for the establishment of Overseas Development Projects, in the context of a "*strategic framework agreement on cooperation in the automobile industry*" to be "*based on the multilateral and bilateral high-level cooperation mechanism*"[3449]. In short, the Government actively promotes a "*coordinated overseas expansion*" of Chinese brands[3450].

Among the implementing measures, the 2017 Automobile Plan lists increased fiscal and taxation financial support. For example, relying on funding sources such as the Automobile Industry Joint Fund (see Section 22.4.5), the support for the implementation of eight major projects, including the construction of innovation centres, is foreseen in the Plan. In addition, leveraging "*policy finance and commercial finance*" and supporting the EXIM to increase its services "*for auto companies going global*" feature among the implementing measures[3451].

Therefore, the 2017 Automobile Plan is a comprehensive policy document which shows how important NEVs became in the wider automotive sector for the Government. The policy guidance of the Government is well shown not only by the quantitative objectives and by the channelling of R&D efforts, but also by the push for the creation of larger companies. This influence hampers ordinary competitive dynamics among market players and favours domestic producers. To these, the Government appears to offer the means for an easy access to finance, especially to fund their international expansion, granted in turn by banking institutions which follow the NEV policy and objectives of the 2017 Automobile Plan.

22.3.9. The 2017 Action Plan For Promoting the Development of the Automotive Power Battery Industry

In the framework of the NEV Plan 2012-2020, in 2017 the MIIT, together with the NDRC, the MOST and the MOF, issued the Action Plan for Promoting the Development of the Automotive Power Battery Industry ('*2017 Battery Action Plan*')[3452]. The 2017 Battery Action Plan tackles the development of the upstream part of the value chain for the production of NEVs, whereas the downstream part is the subject of the 2017 Automobile Plan. As the 2017 Automobile Plan, the 2017 Battery Action Plan foresees a development of the battery industry with a goal to serve in turn the development of the NEV industry. Therefore, the growth of the battery industry must be '*coordinated*'[3453] and the R&D is directed towards the improvement of lithium-ion power batteries[3454] – the main battery type used for NEVs. To achieve these goals, the 2017 Battery Action Plan provides for an "*increase* [of] *policy support*"[3455]. This policy support includes the "*guiding role of the government*" and the "[e]*xemption from excise tax if the power battery product is eligible;* [p]*ower battery enterprises are eligible to benefit from tax incentives such as high-technology enterprises, technology transfer and technology development*"[3456]. As for

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3449 Column 8, 2017 Automobile Plan.
3450 Column 8, 2017 Automobile Plan.
3451 Section 4(2), 2017 Automobile Plan.
3452 See at: https://www.gov.cn/xinwen/2017-03/02/content_5172254.htm#2 (accessed on 12 June 2023).
3453 Section 1(2), 2017 Battery Action Plan.
3454 Section 2(2), 2017 Battery Action Plan.
3455 Section 4(1), 2017 Battery Action Plan.
3456 Section 4(1), 2017 Battery Action Plan.

the NEV industry, the Government intends also to "*support* [...] *investments and the construction of factories of domestic power battery companies abroad*"[3457].

Therefore, the 2017 Battery Action Plan shows how the policy guidance of the Government encompasses the whole value chain of the NEVs. In particular, it shows that the development of the battery industry is directed to serve the purposes of the development of the NEV industry. Finally, it shows the preference accorded by the Government to domestic battery producers, with a view to strengthen them and encourage their market penetration abroad.

22.3.10. THE 2017 DUAL-CREDIT POLICY

In 2017, the MIIT, together with MOF, the MoC, the General Administration of Customs and the General Administration of Quality Supervision, Inspection and Quarantine, issued the Parallel Management Method for Corporate Average Fuel Consumption and New Energy Vehicles Credits for Passenger Vehicles ('*Dual-Credit Policy*')[3458].

The Dual-Credit Policy is a system of points attributed to companies on two parallel scales: on the one side, the reduction of the average fuel consumption for all their passenger vehicles (including NEVs), on the other side, the production or import of NEVs. The Dual-Credit Policy applies only to the average fuel consumption and the production of passenger vehicles, and not to other categories of vehicles. The points can be positive, i.e. credits, or negative, i.e. debits. Positive points are generated when a company remains *below* the standard of assessment for its average fuel consumption and *above* the standard of assessment for the production volume or import volume of passenger NEVs. Negative points are generated when a company exceeds the standard for average fuel consumption or does not meet the standard for the production or imports of NEVs. Negative points can be offset by purchasing them from NEV producers with a positive balance. Failure to offset negative points implies administrative penalties, such as a compulsory stop to the production of high fuel consumption vehicles, to the registration of new vehicles and to capacity expansion. While positive and negative points are attributed on two different scales, what matters is the combination between the two. This means that, for example, a company with a high fuel consumption can still have a positive balance if it produces a lot of NEVs. Moreover, negative points appear to be calculated at consolidated level. Therefore, one producer can offset its negative points with the positive points of a related company. While this mechanism appears to be automatic for fully controlled entities[3459], it is unclear if this works automatically also for minority stakes[3460]. For example, the need to offset its negative points is the reason why in 2017 GWM acquired a 25% stake in Yogomo (rebranded on the occasion of the share purchase as Link Tour). At the same time, Yogomo sold to GWM all its corporate average fuel consumption credits and a certain amount of NEV credits[3461]. Thus, in this

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3457 Section 4(5), 2017 Battery Action Plan.

3458 See at: https://www.gov.cn/zhengce/2022-11/27/content_5722693.htm (accessed on 12 June 2023).

3459 See at: https://auto.cctv.com/2022/07/18/ARTIhUdJiLnh2aaBKQAhSaBL220718.shtml (accessed on 12 June 2023).

3460 Certain sources claim that this would be the case, see at: https://www.sciencedirect.com/science/article/pii/S0921344920300343#kwd0005 (accessed on 12 June 2023).

3461 See at: https://gasgoo66.wordpress.com/2018/07/24/yogomo-changes-name-as-link-tour-to-target-new-energy-pvs/ (accessed on 12 June 2023).

instance, while an agreement was concluded, GWM obtained more credits than it would have been entitled to consolidate with only a 25% stake.

The methodology for the calculation related to the average fuel consumption was included in the successive reviews of the Fuel Consumption Evaluation Methods and Targets for Passenger Vehicles, initially issued for other purposes in 2011[3462], then reviewed in 2014 and once more in 2019, with application as of 1 January 2021[3463]. The standard for the average fuel consumption is the ratio between the actual value of the average fuel consumption of a company in a certain year and a target value for the same company in the same year. The actual value of the average fuel consumption of a company in a certain year is calculated using the amount of fuel consumed by each individual vehicle type of the company, multiplied by the corresponding annual production or import volume, divided by the total annual production or import of passenger vehicles of the company. The target value of the average fuel consumption in the 2011 version was a certain value of fuel consumption set for each vehicle type[3464], which then developed into a formula in the 2019 version[3465]. Therefore, in the 2019 update, the standard for the average fuel consumption in 2021 was set at 123% of the target value, progressively decreasing in the following years: in 2022 120% of the target value, in 2023 115% of the target value, in 2024 108% of the target value and finally, as of 2025, actual and target value should coincide[3466].

The methodology for the calculation related to the production of NEVs was included in the Dual-Credit Policy and in the Passenger NEV Model Credit Calculation Method[3467]. On this scale, the points correspond to the difference between the actual production and import and the target production and import. To calculate the actual production and import, a formula in the Passenger NEV Model Credit Calculation Method ensures a certain amount of points for each type of NEV produced or imported. The target production and import of NEVs is instead established in relation to the total production and import of passenger vehicles of each company.

Points awarded to the actual production and import of NEVs in the formula have been progressively decreased, in order to compel companies to produce and import more NEVs[3468].

The Dual-Credit Policy deeply affects competitive dynamics in the Chinese NEV market, as it concurs in further enlarging and reinforcing companies which are already large. Indeed, as mentioned, the focus of the Dual-Credit Policy is on the production or import, given that also the average fuel consumption depends on the NEVs or other low-emission vehicles produced or imported. Thus, companies with a good fuel performance or high production have the possibility to offset losses or obtain additional income through the sale of credits. On the

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3462 See at: https://members.wto.org/crnattachments/2014/tbt/CHN/14_4356_00_x.pdf (accessed on 12 June 2023).

3463 See at: https://members.wto.org/crnattachments/2019/TBT/CHN/19_5669_00_x.pdf (accessed on 12 June 2023).

3464 Article 4(2) of the 2011 Fuel Consumption Evaluation Methods and Targets for Passenger Vehicles.

3465 Article 4(2) of the 2019 Fuel Consumption Evaluation Methods and Targets for Passenger Vehicles.

3466 Article 5(3) of the 2019 Fuel Consumption Evaluation Methods and Targets for Passenger Vehicles.

3467 Attached as Annex 2 to the Dual-Credit Policy, available at: https://www.gov.cn/zhengce/2022-11/27/content_5722693.htm (accessed on 12 June 2023).

3468 See at: https://auto.sina.com.cn/zz/wb/2022-07-08/detail-imizirav2545819.shtml (accessed on 12 June 2023).

contrary, smaller or non-established companies, with a bad fuel consumption or low production have to invest resources in offsetting their debits, automatically reducing potential investments in R&D and production. Furthermore, companies backed by wealth investors have the means to afford the purchase of credits or shares in companies with credits, whereas start-ups and smaller companies have lower chances to offset their debits. In essence, the Dual-Credit Policy favours the consolidation of the market, contributing to the objective already outlined by the Government in the 2017 Automobile Plan[3469].

22.3.11. NEVs IN THE RECOMMENDATIONS FOR THE 14th FYP

In October 2020, the CCP Central Committee approved its Recommendations for the Formulation of the 14th FYP (2021-2025) for National Economic and Social Development and the Long-Range Objectives Through the Year 2035 ('*14th FYP Recommendations*')[3470]. The 14th FYP Recommendations provide the basic guidance for the full formulation of the 14th FYP. NEVs are mentioned among the SEIs whose development the Party intends to foster and expand. Moreover, automobiles more generally are indicated as a consumer product of which the Party intends to foster consumption, promoting "*a shift from purchase management to usage management*".

22.3.12. NEVs IN THE 14TH FYP

NEVs are firstly mentioned in Article VIII of the 14th FYP, entitled "*Deepen the implementation of the manufacturing powerhouse strategy*", and included in Part Three of the 14th FYP, dedicated to "*Accelerate the development of a modern industrial system and consolidate and strengthen the foundation of the real economy*". NEVs are listed, together with intelligent (connected) vehicles, among the sectors for which an increase of the manufacturing core competitiveness is prescribed. The 14th FYP envisages to "*make breakthroughs in key technologies such as high-safety power batteries, high-efficiency drive motors, and high-performance power systems for new energy vehicles and accelerate the R&D of key components such as the basic technology platforms for intelligent (connected) vehicles, software and hardware systems, steer-by-wire chassis, and smart terminals*".

Mirroring the 14th FYP Recommendations, the 14th FYP also mentions the NEVs as a strategic emerging industry in Article IX, titled "*Develop and expand strategic emerging industries*", and specifically in Section 1 therein, dedicated to "*Build new pillars of the industrial system*".

22.3.13. THE NEW ENERGY VEHICLE INDUSTRY DEVELOPMENT PLAN (2021-2035)

Following up on 14th FYP Recommendations for the NEV sector, the State Council approved in October 2020 the New Energy Vehicle Industry Development Plan (2021-2035) ('*NEV Plan*

3469 See Section 2(2), 2017 Automobile Plan.

3470 Chinese version available on https://web.archive.org/web/20201104114039/http:/www.xinhuanet.com/politics/zywj/2020-11/03/c_1126693293.htm, English translation available at: https://cset.georgetown.edu/publication/proposal-of-the-central-committee-of-the-chinese-communist-party-on-drawing-up-the-14th-five-year-plan-for-national-economic-and-social-development-and-long-range-objectives-for-2030/ (accessed on 12 June 2023).

2021-2035')[3471]. This was not the first time that the State Council issued directives on NEVs, indeed, the NEV Plan 2021-2035 follows up on the NEV Plan 2012-2020 described in Section 22.3.4. Since 2012, the NEV industry in China experienced a substantial growth, but in 2020 the State Council acknowledged certain issues affecting the industry. These issues included weak capabilities for innovation in core technologies, the need for improvement of the systems to ensure quality, the deployment of related infrastructure still lagging behind, a flawed industrial ecosystem and increased market competition. Thus, the declared objectives of the NEV Plan 2021-2035 are to promote the high-quality development of the NEV industry and to accelerate the establishment of an automobile powerhouse.

According to Section 1 of Chapter II, the general strategy for the development of the NEV industry has a supply-side structural reform as one of its main lines of actions and focuses on integrated innovation, on key core technologies, on improving the industrial basic capabilities, on building a new industrial ecosystem, on improving the infrastructure system, on enhancing the industrial development context, on promoting a high-quality and sustainable development of the industry and on accelerating the establishment of an automobile powerhouse.

Pursuant to Section 2 of Chapter II, even though one of the basic principles of the NEV Plan 2021-2015 is the decisive role of the market in resource allocation and in companies' positioning, this role is to be balanced by the Government's role in the strategic planning guidance and in keeping the '*market order*' and by the Government's support offered to all operators to develop key core technologies, to increase business model innovation and to form an innovative industrial ecosystem. Moreover, advancements in the field of NEVs will be '*coordinated*', both horizontally and vertically, in order to bring forward also sectors integrated with NEVs, such as energy, transports, information and communications.

Section 3 of Chapter II sets a clear target for the development of the NEV industry: by 2025, NEVs must reach 20% of the sale volume of new vehicles.

Section 1 of Chapter III, labelled "*Deepen the 'three vertical and three horizontal' R&D layout*", clarifies that the 3 vertical layouts correspond to the three technologies of NEVs to which the NEV Plan 2021-20135 applies: *(i)* BEVs, *(ii)* PHEVs, and *(iii)* FCEV. On the contrary, the 3 horizontals correspond to the key technological components of the supply chain of NEVs: *(i)* power battery and management system, *(ii)* motor and power electronics, and *(iii)* networks and intelligent technologies. R&D is, therefore, a key factor for the development of the NEV industry according to the NEV Plan 2021-2035 and Section 2 of Chapter III provides for the establishment and improvement of joint R&D mechanisms of leading companies, national key laboratories and national manufacturing innovation centres.

Chapter IV, Section 1, dedicated to the "*Support the development of eco-oriented companies*", foresees strengthening the role of leading companies in areas with a solid industrial and innovation background by promoting both upstream and downstream collaborative innovation,

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3471 Chinese version available at: http://www.gov.cn/zhengce/content/2020-11/02/content_5556716.htm and https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/202111/t20211101_1302487.html?code=&state=123, English overview available at: https://theicct.org/wp-content/uploads/2021/12/China-new-vehicle-industrial-dev-plan-jun2021.pdf (accessed on 12 June 2023).

the integrated development of large and small companies, industrial clusters capable of projecting their influence and competitiveness at international level, and the modernisation of the industrial value chains.

The NEV Plan 2021-2035 is not limited to NEVs but extends also to batteries for NEVs. Section 2 of Chapter IV labelled "*Promote the innovative application of key systems*" strives to promote the development of the whole value chain of batteries. This includes, notably, encouraging companies to secure access to key resources such as lithium, nickel, cobalt and platinum. More widely, the focus is placed on the improvement of modular standard systems of batteries, on accelerating developments in key manufacturing equipment, on improving process and production efficiency, on improving the recycling of batteries (including the efficient extraction of valuable elements of scrapped power batteries), the cascading of their use and shared recycling channels.

The NEV Plan 2021-2035 considers also the impact of the growing use of NEVs and its impact on the electric grid. The proposed solutions to improve the interaction between NEVs and the grid include strengthening the research on high-cycle life batteries and promoting the application of low-power direct current technologies. The NEV Plan 2021-2035 envisages also to "*encourage local governments*" to carry out pilot applications of the NEVs-grid interaction[3472], to coordinate the charging and discharging of NEVs and the power dispatching needs. Local governments are also empowered to fully make use of peak/valley electricity prices and preferential charging for NEVs in order to achieve an efficient NEVs-grid interaction.

In addition, the NEV Plan 2021-2035 covers hydrogen as a fuel for NEVs. In this respect, companies will be guided to rationally deploy the hydrogen refuelling infrastructure, based on the hydrogen fuel supply and on consumer demand, and to improve the safety level of operations. The use of existing facilities for supply services of oil, gas, hydrogen and electricity will be supported.

The plan is intended for the domestic NEV market, but it takes into account the international dimension as well. In fact, Section 2 of Chapter VII, labelled "*Accelerating integration into global value chains*", states that guidance will be provided to companies to prepare international development strategies, to continuously improve their international competitiveness, to increase their international market developments and to promote cooperation between production and R&D, marketing, other value chains. Companies are also encouraged to make full use of their domestic and foreign financial resources and to internationalise the consumer credit system, in order to offer also consumers abroad an incentive to purchase Chinese NEVs. Support will also be available to companies to establish international marketing services networks and joint service platforms such as overseas warehouses and after-sales service centres in key export markets.

Concerning the domestic Chinese industry, Section 1 on "*Deepening Industry Management Reform*", included in Chapter VIII on '*Implementing Measures*', plans to improve the management of the corporate average fuel consumption and of NEV credits in the framework

3472 Pilot applications are tests to show the relevance of a new device.

of the Dual-Credit Policy and to "*effectively undertake financial subsidy policies*". Moreover, the intention is to reduce confusion concerning "*blindly launching*" NEV manufacturing projects. While the NEV Plan 2021-2035 refers in this respect to the market competitive dynamics, it also mentions the support for mergers and reorganizations in order to structure bigger and stronger companies and to further improve the degree of industrial concentration.

More broadly, Section 2 of the same chapter provides for the implementation of "*preferential tax policies*" for NEVs, for "*financial support*" for the deployment of public charging infrastructure and for "*preferential policies*" for NEVs, such as parking and charging. The NEV Plan 2021-2035 mandates that, by 2021, the proportion of NEVs in public areas in National Ecological Civilization Pilot Zones – selected areas established to improve the coordinated development of economy and environment – and in key areas for air pollution prevention and control was to be at least 80%. It is unclear if this target was met, but in January 2022 the Government announced that it intended to equip 80% of the National Ecological Civilization Pilot Zones and of the key areas for air pollution prevention and control with rapid charging stations by 2025[3473].

Finally, given the importance of NEVs, in the same chapter, Section 5 on '*Strengthening Organizational Coordination*' aims at strengthening the overall policy planning of NEVs and energy, transport, information and communication, standard and regulations, with a specific attention to the concrete implementation of the planning. All relevant administrative departments should formulate their own work plans and support policies and measures according to their function. The implementation of the policies will involve all regions, in light of their specific local conditions. The NEV Plan 2021-2035 also acknowledges the role of industry organizations as a bridge between companies and the Government and to coordinate cross-border exchanges and collaboration platforms (see also Section 2.3.3). In particular, the MIIT is tasked with the smooth implementation of the NEV Plan 2021-2035.

22.3.14. THE 2023 ANNOUNCEMENT ON THE CONTINUATION AND OPTIMIZATION OF THE NEW ENERGY VEHICLE PURCHASE TAX REDUCTION POLICY

In June 2023, the MOF, the State Administration of Taxation and the MIIT released their Announcement No. 10 of 2023 on the Continuation and Optimization of the New Energy Vehicle Purchase Tax Reduction Policy ('*Purchase Tax Exemption Announcement*')[3474]. In fact, NEVs would normally be subject to a 10% purchase tax. However, starting from 2014, the Government exempted the purchase of NEVs produced in China or imported, and fulfilling certain technical requirements, from the purchase tax. The purchase tax exemption was meant to expire at the end of 2020 but was prolonged until the end of 2022 in the wake of the economic impact of the COVID-19 pandemic, and then further extended to the end of 2023. The

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3473 See at : http://english.www.gov.cn/statecouncil/ministries/202201/22/content_WS61eb3b40c6d09c94e48a415d.html (accessed on 12 June 2023).

3474 See at: http://szs.mof.gov.cn/zhengcefabu/202306/t20230620_3891500.htm (accessed on 16 June 2023).

exemptions from the purchase tax on NEVs accounted for more than RMB 80 billion (USD 11.9 billion) in 2022[3475].

The Purchase Tax Exemption Announcement provides that the purchase tax exemption will last until the end of 2027. Between January 2024 and December 2025, the purchase tax will be capped at a higher amount, which will be halved between January 2026 and December 2027 with the purpose to gradually reduce the Government's support. The purchase tax exemption applies to passenger BEVs, PHEVs and FCEVs meeting the technical requirements indicated in a separate act.

The further prolongation of the purchase tax exemption shows that the Government keeps intervening into the NEV market with a view to ensuring its economic viability. Indeed, in an article reported on the State Council's website it is stated that the Purchase Tax Exemption Announcement is "*expected to further stimulate consumer buying sentiment for NEVs and inject strong impetus into the world's biggest auto market*"[3476].

The purchase tax exemption on NEV prices may contribute to suppress NEV prices. This role would be even enhanced after that the purchase subsidy scheme was terminated in December 2022 (see Section 22.3.3). However, it is unclear how NEV producers would react should the tax exemption be terminated: they could either raise the prices by the corresponding 10% or they could be able to absorb the 10% increase without raising the prices or raising the prices by a lower percentage. This would mean that for the period of tax exemption in place, the NEV could producers to benefit from additional streams of income which would have been otherwise levied by the Government's tax administration.

22.3.15. THE 2023 MEASURES TO FURTHER PROMOTE THE AUTOMOBILE CONSUMPTION AND PLANS TO BOOST THE NEV INDUSTRY

In July 2023, the NDRC announced a series of measures meant to further increase the automobile consumption, and notably the purchase of NEVs[3477]. These measures include the reduction of the purchase and use cost of NEVs, such as through the adjustment of the price of the electricity linked to the use of NEVs, and an increased credits support, such as for the battery insurance. The set of measures also recalls the prolongation of the purchase tax exemption (see Section 22.3.14) and the measures adopted to facilitate the spread of NEVs in rural areas.

In parallel, the State Council published its Plans to boost NEV industry[3478]. These Plans are articulated around three pillars: *(i)* further promote NEV sales, *(ii)* facilitate the purchase of electric cars in rural areas, and *(iii)* improve the NEV charging infrastructure. The further promotion of NEV sales will take the form of the purchase tax exemption (see Section 22.3.14),

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3475 See at: http://www.chinatax.gov.cn/eng/c101269/c5183762/content.html (accessed on 16 June 2023).

3476 See at: https://english.www.gov.cn/news/202306/22/content_WS6493ab47c6d0868f4e8dd1d0.html#:~:text=China%27s%20latest%20policy%20measures%20to,auto%20market%2C%20industry%20experts%20said (accessed on 12 June 2023).

3477 See at: https://english.www.gov.cn/news/202307/21/content_WS64ba4441c6d0868f4e8de048.html (accessed on 12 June 2023).

3478 See at: http://english.www.gov.cn/policies/featured/202308/12/content_WS64d6b984c6d0868f4e8de7d7.html (accessed on 12 June 2023).

with specific tax exemption provision to be adopted for NEVs with battery swap technology, and through the promotion of the use of NEVs in public transport, in the CCP and Government offices and in taxi services. The spread of NEVs in rural areas is to be achieved by improving the deployment of the charging infrastructure and of NEV sale and after-sale services, by developing NEV segments such as vans and trucks and by offering promotional coupons to rural residents. The improvement of the NEV charging infrastructure will be obtained by applying household electricity rates to battery charging and battery swapping in residential areas and by providing increased credit support, notably on battery insurance.

These measures show the Government's continued efforts to foster NEV consumption. Moreover, it shows that the Government's support widened – instead of shrinking – to ancillary aspects of the use of NEVs, such as the price of the electricity needed for their use or the safety of the batteries, which justify the focus on the credit support for battery insurance.

22.3.16. PROVINCIAL, REGIONAL, MUNICIPAL AND LOCAL PLANS

The instructions of the 14th FYP and of the NEV Plan 2021-2035 are reflected and implemented in the corresponding provincial, regional, municipal and local plans.

The provincial plans ensure the effectiveness of the implementation of the provisions of the central plans and provide more details on how the objectives of the central plans should be translated into policies within individual provinces (see also Section 4.2.1). In particular, this Report looked at the plans of the following provinces and provincial-level administrative units where NEV manufacturers are located:

- Anhui, where Chery is headquartered;
- Guangdong, where Xpeng is headquartered;
- Guizhou;
- Fujian, where CATL is headquartered;
- Jiangsu;
- Zhejiang, where Geely's main production plant is located;
- Guangxi Zhuang; and
- Shanghai, where SAIC is headquartered.

In turn, local plans implement provincial and provincial-level plans at lower administrative levels, such as the main industrial cities. Lower administrative entities analysed include:

- the city of Hefei, where NIO is located; and
- the Pingshan district in the city of Shenzhen, where BYD is headquartered.

Anhui provides an example of this cascade of plans. Anhui drafted its provincial High-quality Development Plan of Automobile Industry in Anhui Province during the 14th FYP ('*Anhui 14th Automobile Provincial Plan*')[3479], with a corresponding plan put in place by Hefei, the

[3479] Available at: http://jx.ah.gov.cn/group6/M00/05/3A/wKg8BmJGrKiADusMAAY2nfCCzQM591.pdf (accessed on 14 June 2023).

province's capital city: 14th FYP for the Development of New Energy Vehicle Industry in Hefei ('*Hefei 14th NEV Local Plan*')[3480].

The following elements included in the above sub-central plans provide a non-exhaustive overview of the planning policies by which the Chinese authorities intend to shape the development and structure of the NEVs sector.

In the Hefei 14th NEV Local Plan, the general governmental control over the industry is based on the principle of "[g]*overnment guidance, market leadership*". This basic principle requires to "[g]*ive full play to the role of the government in various aspects such as top-level design, platform construction, pilot applications, application and promotion, etc. Strengthen policy support and further create an environment guiding high-end production factors to concentrate towards the new energy vehicle industry*". At the same time, under this principle, the local authorities are supposed to "[be g]*uided by market demand, give full play to the decisive role of the market as regards resource allocation, strengthen the key position of enterprises in the selection of technological paths and product manufacturing capacity layout, foster a better combination of an efficient market with a favourable government, and establish a dynamic development environment*"[3481].

Still, the role of the market seems to be subordinate to the role that governmental authorities have in competitive dynamics between market players. Indeed, the 14th FYP New Energy Vehicle Industry Development Plan of the Jiangsu Province ('*Jiangsu 14th NEV Provincial Plan*')[3482] intends to "*promote industry mergers and reorganizations*"[3483] in order to foster the development of the Jiangsu NEV industry.

The Hefei 14th NEV Local Plan also set detailed quantitative production targets: "*Strive to ensure that by 2025, the scale of the city's new energy automobile industry exceeds RMB 700 billion and the production capacity of complete vehicles exceeds 3 million, to foster 10 enterprises with a scale of RMB 10 billion and to ensure that the output value and output volume rank first in the country;* [d]*evelop a new energy vehicle and parts industry system with a comprehensive layout and a reasonable structure, the annual production capacity of batteries shall exceed 300 GWh, and the annual production capacity of drive motor systems shall exceed 3 million sets*"[3484].

The Hefei 14th NEV Local Plan also envisaged to support several investments to: "*Strive to build by 2025, 1 national new energy vehicle industry innovation center, 5 public innovation centers, and to foster 1 business model innovation project as well as 10 new innovation platforms above the provincial level by 2025*"[3485].

This last provision of the Hefei 14th NEV Local Plan implements the Anhui 14th Automobile Provincial Plan, where this support was addressed also to specific industrial parks and

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3480 Available at: https://www.ahchanye.com/zc/24046.html (accessed on 14 June 2023).
3481 Chapter II, Section 2, Hefei 14th NEV Local Plan.
3482 Available at: http://www.jiangsu.gov.cn/art/2021/11/24/art_46144_10124132.html (accessed on 14 June 2023).
3483 Chapter 5, Section 1, Jiangsu 14th NEV Provincial Plan.
3484 Chapter II, Section 3, Hefei 14th NEV Local Plan.
3485 *Ibid.*

companies in the area: "*Accelerate and promote the construction of the Xinqiao Smart Electric Vehicle Industrial Park, and create a world-class smart electric vehicle industrial cluster with a complete industrial chain and integrating R&D and manufacturing, pilot applications and application, as well as industry and supporting services. Support NIO's long-term development planning and layout around Xinqiao Industrial Park, and establish R&D, manufacturing, marketing and management teams within the park. Establish NIO R&D and Innovation Center, carry out innovative research and development concerning complete vehicles, core components and autonomous driving, create a globally competitive and leading innovation chain; attract R&D staff and technical workers and strive to form an innovative place gathering high-level talents.* [...] *After completion of the park, it is estimated that the final vehicle production capacity will be 1 million vehicles per year, and the battery production capacity will be 100GWh per year*"[3486].

Evidence of this support was the framework agreement signed by Hefei and NIO to jointly plan and build the Xinqiao Industrial Park, for an initial investment of RMB 5 billion[3487].

An express support for specific companies was also included in the Implementation Plan for Accelerating the Development of the New Energy Vehicle Industry in Shanghai (2021-2025) ('*Shanghai NEV Municipal Plan*')[3488], which pledged to: "*Support SAIC Motor to develop new energy vehicles. By 2025, the sales of self-owned brand passenger vehicles and new energy vehicles will account for more than 30% and the group's new energy vehicle sales will account for more than 20%, ensuring that the core technology is under independent control and a comprehensive position of strength and domestic leadership. Encourage domestic and foreign strong companies with leading technology to invest in complete vehicle manufacturing and R&D projects in Shanghai*"[3489]. Furthermore, according to SAIC's 2021 annual report, the company received regional subsidies for project development in excess of RMB 1.13 billion, with a significant proportion of that support being directly tied to the NEV sector[3490].

The support to the growing NEV industry is not limited to government authorities, but extends also to the banking sector, as it is shown by the 14th FYP for the Development of the New Energy Automobile Industry in the Guangxi Zhuang Autonomous Region ('*Guangxi Zhuang 14th NEV Regional Plan*')[3491]. Indeed, the Guangxi Zhuang 14th NEV Regional Plan endeavoured not only to "[a]*ctively play a policy and commercial financial role and increase the financial support for the development of the new energy automobile industry*", but it also stated expressly that "[f]*inancial institutions are encouraged to provide full-industry-based financial services for new energy automobiles*"[3492].

Each province appears to support NEV producers established in its territory. In particular, marketing and branding are common concerns for lower levels of government. Typically, the

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3486 Chapter III, Section 1, Column 1, Anhui 14th Automobile Provincial Plan.

3487 See NIO's website: https://www.nio.cn/news/neopark-officially-starts-construction (accessed on 14 June 2023).

3488 Available at: https://app.sheitc.sh.gov.cn/xnyqc/688177.htm (accessed on 14 June 2023).

3489 Chapter II, Section 2, Point 1, Shanghai NEV Municipal Plan.

3490 SAIC Motor Corporation Limited - Annual Report 2021, p. 212.

3491 See at: http://www.gxzf.gov.cn/zwgk/fzgh/zxgh/t12018715.shtml (accessed on 14 June 2023).

3492 Chapter VI, Section 1, Guangxi Zhuang 14th NEV Regional Plan.

14th FYP for the Development of the New Energy Automobile Industry in the Zhejiang Province ('*Zhejiang 14th NEV Provincial Plan*')[3493] intended to "[s]*upport Geely Group's deployment in the mid-to-high-end passenger car market and build a world-renowned brand of new energy vehicles. Promote Weima, Hezhong, Leapao, Tianji and other new car manufacturers to improve their positive development capabilities and brand marketing capabilities*"[3494].

Leading NEV companies are often identified in provincial and local plans as models for further development of the industry through governmental support. In the Brand-building Plan for the New Energy Automobile Industry in Pingshan District, Shenzhen ('*Pingshan NEV Local Plan*')[3495], BYD and Kaiwo are identified as the model for the implementation of the 'Headquarters R&D + High-end Manufacturing' layout[3496]:

> *Relying on the research and development strong capacities of high-quality new energy automobile enterprises in the Pingshan District, such as BYD and Kaiwo, strengthen the building of colleges and universities, research institutions, national key laboratories, national engineering laboratories and engineering centers and improve innovation at the regional level. Complement the innovation chain around the new energy vehicle industry chain, improve the upstream and downstream industry chains of new energy vehicles, batteries, communication power supplies, UPS* [uninterruptible power supply], *charging guns, wires and cables, supercapacitor chemicals, semiconductor chemicals, etc.so as to form a complete industry chain. Ensure a high degree of clustering of the new energy vehicle industry, continue to build and introduce a number of technology industry innovation platforms that closely support new energy vehicles R&D and manufacturing, and accelerate the construction of a technological innovation system that deeply integrates production, academics, research and application. Focus on 'integrating headquarters, R&D and production', develop actions for listed companies to take root, actions for key enterprises to stabilize growth, and accelerate the formation of a functional layout of 'headquarters R&D + high-end manufacturing'.*

The development of the NEV industry is not based only on the development of new plants and capacities, but also on the conversion of existing automobile capacities for the production of ICEs. The Jiangsu 14th NEV Provincial Plan correspondingly intends to "[a]*ccelerate the transformation of Nanjing, Xuzhou, Suzhou, Yancheng, Yangzhou and other automobile production bases to the direction of new energy vehicles*"[3497].

3493 Available at: https://www.zj.gov.cn/art/2021/6/24/art_1229540815_4671257.html (accessed on 14 June 2023).

3494 Chapter 3, Section 1, Zhejiang 14th NEV Provincial Plan.

3495 Available at: https://www.sist.org.cn/psqxnyqccyyq/yqppjs/202008/t20200812_2302116.html (accessed on 14 June 2023).

3496 Chapter IV, Section 1, Point 3, Pingshan NEV Local Plan.

3497 Chapter 5, Jiangsu 14th NEV Provincial Plan.

In the Anhui 14th Automobile Provincial Plan, the support to the activity of the NEV industry and of specific NEV companies is not limited to the domestic market but directed also to exports already at provincial level:

> *Support the e-commerce of component supplying companies, build public overseas warehouses for export products, share channels to overseas markets and service support systems. Create tools such as import and export trade platforms, overseas industry parks as well as trade parks and guide the development of clusters of Chinese overseas investment enterprises.* [...] *By 2025, Chery Automobile shall export 500,000 vehicles with an export value of USD 5 billion. Foster Chery to further enhance its international competitiveness,* [...] *focus on expanding on strategic markets such as Europe, North America, and ASEAN countries* [...] *Support NIO to expand on the European market. Foster NIO to implement the 'Marco Polo Plan'* [NIO's codename for its entry into the European market[3498]], *adopt a differentiated development path and turn the 'NIO China Model' into the 'NIO Overseas Model' according to local conditions.* [...] *Support NIO to continue to expand on the European market, to expand on 5 national markets by 2025, and to select opportunities to build factories overseas*[3499].

The geographical distribution of the NEV industry is also controlled by the government authorities, as is clear from the 14th FYP for the Development of Electric Vehicle Charging Infrastructure in Guangdong Province ('*Guangdong 14th EV Infrastructure Provincial Plan*')[3500]:

> *Rely on Guangzhou, Shenzhen, Zhuhai, Foshan, Zhaoqing, Dongguan, Huizhou, Zhanjiang, Maoming, Shanwei, Yunfu and other cities and speed up the development pace of new energy vehicles. Guangzhou shall speed up the construction of new energy vehicle production bases and promote the quick industrialization of new energy vehicle models. Shenzhen, with Pingshan District as the core, shall build a national-level new energy vehicle industry base. Zhuhai, with Jinwan District as the core, shall focus on developing the manufacturing of complete new energy vehicles, lithium battery materials, powertrain, charging equipment and key components of new energy vehicles.*

The support for key projects in the NEV industry covers also NEVs' related parts and components. The Development Plan of New Energy Automobile Industry in Fujian Province (2022-2025) ('*Fujian 2022-2025 NEV Provincial Plan*')[3501] identified the electric battery, the electric motor and the electronic control unit as the *"three electric systems and other key components"*[3502]. Thus, as regards batteries, the government in the Fujian 2022-2025 NEV

3498 See at: https://finance.sina.com.cn/stock/relnews/us/2020-11-01/doc-iiznezxr9218648.shtml (accessed on 14 June 2023).

3499 Chapter VI, Section 2, Project 9, Anhui 14th Automobile Provincial Plan.

3500 Chapter III, Section 1, Column 4, Guangdong 14th EV Infrastructure Provincial Plan; available at: http://www.gd.gov.cn/zwgk/wjk/qbwj/yf/content/post_3458462.html (accessed on 14 June 2023).

3501 Available at: https://fdi.swt.fujian.gov.cn/uploadfiles/file/20220426/1650941604952489.pdf (accessed on 14 June 2023).

3502 Chapter I, Section 1, Fujian 2022-2025 NEV Provincial Plan.

Provincial Plan foresees to provide "[s]*upport for power and storage batteries such as the* [battery producers established in Fujian]"[3503] and "*to increase credit support for full car leases and battery leasing*"[3504]. Moreover, as regards the motor and the electronic control unit, the government intends to provide "[s]*upport for the development of new energy motors and electronic control systems, and* [envisages that] *the Xiamen Tungsten industry develops the automobile industry using the advantage of rare earth eternal magnetic materials*"[3505].

Similarly, the 14th FYP Development Plan for the New Energy Automobile Industry in Guizhou Province ('*Guizhou 14th NEV Provincial Plan*')[3506] seeks to:

> *Support the construction of key projects. Speed up and foster the Guiyang BYD's power battery project with an annual output of 10GWH, the Evergrande new energy power battery project* [...], *Dongfang Electric's hydrogen fuel cell project, Anda Technology's 30,000-ton/year lithium iron phosphate and supporting construction projects as well as its20,000-ton/year lithium iron phosphate smart manufacturing technical transformation and expansion project, Anda Technology's 50,000 tons/year new energy vehicle waste battery recycling technical transformation project, Wuchuan Automobile's annual production of 1 million tons of automotive aluminium alloy die-casting projects, Baike automobile brake molds production line project, a number of key projects such as the Guizhou Aerospace Smart Manufacturing Industry Cluster Base Project in Guiyang Economic and Technological Development Zone, Zhenhua New Materials Production Line Construction Project with an annual output of 12,000 tons of lithium-ion battery cathode materials* [...].

Consequently, the competitive dynamics seem to be distorted also in the industry of parts and components. Indeed, the Jiangsu 14th NEV Provincial Plan intends to "[e]*ncourage key parts and components companies: to focus on increasing their market share, on mastering core technologies, on increasing quality and cost controllability etc.; and to proceed to mergers and reorganizations and speed up the fostering and emergence of automobile parts industry clusters with a systematic development, a modular manufacturing pattern and integrated supplies*"[3507]. Moreover, authorities try to redirect the production of automobile parts and components specifically towards the NEV industry.

22.4. MARKET DISTORTIONS

The amount and detail of the regulatory and policy documents concerning NEVs and batteries in China shows the importance that the Government attaches to these industrial sectors. Due to the combination of the different measures, the level of supervision that the Government exercises is so high that its intervention directly interferes with free market forces. In this

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3503 Section III(I), Fujian 2022-2025 NEV Provincial Plan.

3504 Section IV(III), Fujian 2022-2025 NEV Provincial Plan.

3505 Section III(I), Fujian 2022-2025 NEV Provincial Plan.

3506 Chapter III, Section 3, Column 3, Guizhou 14th NEV Provincial Plan; available at : https://m.askci.com/news/zszc/20220317/1739301746254.shtml (accessed on 14 June 2023).

3507 Chapter 5, Section 1, Jiangsu 14th NEV Provincial Plan.

section these measures and their application (or lack of application) are systematised based on the elements on which they could have an impact.

22.4.1. STATE OWNERSHIP AND CONTROL

State-owned companies constitute a considerable share of the NEV and battery sectors. As mentioned in Section 22.2.2, the State owns four large traditional automakers which produce also NEVs, dubbed the 'Big Four': SAIC, Dongfeng, FAW Group and Chang'an. In addition, it owns some important NEV producers, including NIO, Brilliance, Chery, GAC and JAC Motors.

The most notable example is NIO. Several entities controlled by the Anhui province (Hefei Construction Investment Holdings (Group) Co., Ltd., SDIC Investment Management Co., Ltd. and Anhui High-tech Industry Investment Co., Ltd. hold 24,1% of NIO (Anhui) Holdings Co., Ltd., the legal entity owning NIO's core business and related assets in China[3508]. As mentioned in Section 22.2.2, the capital injection by the Anhui province happened at the same time of the move of NIO's headquarters to Hefei at a moment when NIO was experiencing a financial reverse. Together with the capital injection, NIO received also loans from State-owned banks, as mentioned in Section 22.4.5. NIO's story is an example of what happens also for other NEV producers, which need considerable funds for the investments for NEV production and find them in the form of equity from State lower administrative entities. Indeed, provinces and other lower levels of government are in competition to attract revenues and employment from NEV producers and try to establish and develop successful NEV companies to reach relevance in the eyes of the central Government.

In the battery sector, in addition to the State-owned NEV producers SAIC and NIO, which are also active as battery manufacturers, CALB is the main State-owned battery producer.

However, State ownership is not limited to NEV and battery manufacturers but extends also to their upstream value chain. Considering for instance lithium, one of the essential raw materials for the production of batteries, China's Yichun city (Jiangxi) has been dubbed as "Asia's lithium capital"[3509] and several lithium mining companies are located there. In August 2022, BYD signed a strategic cooperation framework agreement with the Yichun city government, the Yichun Economic Development Zone and Yichun Mining Company, to invest RMB 28.5 billion in the construction of a 30 GWh battery plant and a 100 000 tonnes capacity lithium carbonate and lithium-containing ceramic facility[3510]. In September 2022, Yichun BYD Mining

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3508 See at: https://www.nio.cn/news/nio-chinas-headquarters-opening-ceremony and at: https://www.nio.cn/news/nio-enters-definitive-agreements-establishing-nio-chinas-headquarters-hefei (accessed on 14 June 2023).

3509 See at: https://www.scmp.com/business/article/3202402/asias-lithium-capital-grinds-halt-output-battery-material-stops-yichun-amid-pollution-investigation?module=inline&pgtype=article (accessed on 14 June 2023).

3510 See at: https://autonews.gasgoo.com/new_energy/70021077.html (accessed on 14 June 2023).

Co., Ltd. was established. The company is jointly held by BYD and Yichun Mining Industry Co., Ltd.[3511], a wholly State-owned company under the Yichun city government[3512].

Even in the absence of equity shareholdings by the State, NEV producers still engage in cooperation with State-owned companies. This is the case of NIO, which in April 2023 signed a strategic cooperation framework agreement with China Resources (Group) Co., Ltd., a state-owned diversified holding company under the supervision of SASAC. The two parties intend to cooperate in the fields of commercial space leasing and construction, investment in and construction of charging and battery swapping infrastructure, plant and community energy management, new material applications and consumer services. This will mainly allow NIO to open centers and stores in real estate areas owned by the State-owned company[3513].

Beyond State ownership and participation in NEV producers, the Government exerts control over all NEV producers by a number of other means. Firstly, the combination of the Government's measures influences the prices of NEVs, leaves little discretion to NEV producers as regards business decisions in the R&D and product development. The technical requirements which used to allow for the disbursement of the purchase subsidy (and still does in the case of purchase subsidies granted by the Government's lower administrative levels, such as those mentioned in Section 22.4.5) and which allow to access the purchase tax exemption have an effect on the price of the NEV benefitting from them, which is lower than it would otherwise be. Beyond that, it favours certain NEV models and technologies, making them cheaper and, consequently, more attractive to customers than models which do not benefit from the subsidy and from the tax exemption. Therefore, companies are encouraged to adopt those models and technologies that benefit from governmental measures. In doing so, the Government is directing R&D and the product development in a specific direction. The technical requirements are therefore actual market drivers.

Secondly, while subsidies and tax exemptions concern the sale of the NEVs, the Dual-Credit Policy, with its negative points, acts as a sanction for non-compliance with the targets. Also in the case of the Dual-Credit Policy there are technical parameters, namely the average fuel consumption and the production or import targets. As mentioned, both of them are actually linked to the production or import, because the average fuel consumption depends on the NEVs produced or imported.

Therefore, it is virtually impossible for a company not to abide by the production targets of the Dual-Credit Policy or the technical requirements for the purchase subsidy and the purchase tax exemption. If it reaches the production targets with models not benefitting from the subsidy and the tax exemption, its sales will be negatively affected. If the company instead produces models benefitting from the tax exemption but it does not meet the production targets, it is still sanctioned with negative points, which are difficult to offset, absent wealth investors with sufficient purchasing power to acquire positive points from other companies or shares in other

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3511 See at: https://www.itdcw.com/news/focus/09221310602022.html (accessed on 14 June 2023).

3512 See at: https://www.yichun.gov.cn/ycsrmzf/xwfbh/202212/7a0202273def4e828552560fb32e10cf.shtml (accessed on 14 June 2023).

3513 See at: https://www.nio.cn/news/20230426002 (accessed on 14 June 2023).

NEV producers. Therefore, the Government put in place a comprehensive system of control able to direct and determine the business strategies of the NEV producers.

22.4.2. CCP PRESENCE IN FIRMS

NEV and battery producers, as all companies in China, are obliged to host a CCP cell in their organisation (see Section 3.3.2.). The importance of this cell is confirmed by the articles of association of some of the main NEV producers. For instance, SAIC's articles of association provide for the "*establishment of party organizations and their disciplinary bodies at all* [company's] *levels*"[3514]. Moreover, SAIC engages to form "*an institutional mechanism for the participation of party organizations in decision-making on important questions, and supports boards of directors, supervisors and operators in the exercise of their functions*"[3515]. Furthermore, as of writing of this Report, SAIC's chairman is also SAIC's party secretary[3516]. To provide a further example, in GAC, the CCP is also involved in the selection of the senior management. According to the company's articles of association: "[w]*hen the board appoints the company's senior management, the party committee prepares and advises on the selection of persons nominated by the board or general manager*"[3517]. Therefore, the CCP does not have only a representative role, but it actively takes part in the strategic decision-making of NEV producers and in the selection of their senior management.

22.4.3. SPECIAL TREATMENT OF DOMESTIC NEV BRANDS AND COMPETITIVE DISTORTIONS

The regulatory framework shows that the focus of the Government's action is devoted to Chinese domestic production and, specifically, to Chinese NEV brands. This is clear from the wording of the objectives in the 2017 Automobile Plan, which refer to Chinese companies and "*Chinese brand cars*" (see Section 22.3.8). Moreover, it is noteworthy that only one foreign NEV brand – Tesla – was able to establish a production of NEVs in China not as part of a JV with a Chinese brand. Apart from Tesla, all the other producers are Chinese brands or in JVs with Chinese brands.

In a wider perspective, the Government's measures appear to unduly interfere with free competitive dynamics. Indeed, in the 2017 Automobile Plan and in the NEV Plan 2021-2035 the Government encourages a consolidation of the NEV market through mergers between the NEV producers[3518]. The Dual-Credit Policy, insofar it allows to offset negative points by purchasing shares of a NEV producer with positive points, provides precisely for a means to achieve the Government's intended objective. As recalled in Section 22.3.10, GWM acquired a 25% stake in Yogomo with the sole objective of obtaining Yogomo's corporate average fuel consumption credits and a certain amount of its NEV credits. As explained in Section 22.3.10, the Dual-Credit Policy ultimately ensures that large companies will become even larger and

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3514 Article 153, SAIC's articles of association.
3515 Article 155, SAIC's articles of association.
3516 See at: https://www.saicmotor.com/chinese/gsgk/dsh/index.shtml (accessed on 15 June 2023).
3517 Article 145, GAC's articles of association.
3518 Section 2(2), 2017 Automobile Plan and Chaoter VIII of NEV Plan 2021-2035.

that small companies will have even less resources and will eventually disappear absorbed by others through Government-induced mergers.

22.4.4. UNDERENFORCEMENT OF BANKRUPTCY LAWS

A further measure that is likely to cause market distortions in the NEV market is the Government's intervention on the occasion of the bankruptcy of NEV producers. Two notable examples can show this. First, the capital injection of the Anhui province in Nio, together with the loans granted by policy banks on the same occasion, with the condition that Nio had to move its headquarters to the Anhui province, were granted at a moment when Nio was on the brink of bankruptcy[3519]. Second, Brilliance actually ended up in a debt restructuring procedure[3520] and the Shenyang city government purchased all its shares[3521] to the point that Brilliance – originally called Brilliance Auto Group Holdings Co. Ltd. – even changed company name to the current one. Originally, Brilliance was already a State-owned company, being owned by the Liaoning province[3522], of which Shenyang is the capital. The intervention of the Shenyang city government could be seen as an attempt to retain Brilliance – together with the related employment, revenues and relevance of the area for the central Government – in the province. In other terms, the Government's intervention does not breach bankruptcy laws, but happens in a way as to prevent the full bankruptcy of the NEV producers and the dispersion of their assets. Notably, such interventions are made by State-owned actors and not by private capital. As a consequence, bankruptcy laws are enforced less frequently than they should and they end up being actually underenforced (see also Section 6.7).

22.4.5. PREFERENTIAL ACCESS TO FINANCE

The NEV industry is an innovative industry which needs continuous investments to improve the performance of NEVs so that they can become attractive to customers as a viable alternative to ICEs. Furthermore, it is a risky investment as NEV start-ups may not always be able to continue their business. In China, the NEV producers' need for investments is mainly covered by provincial and local governments in the form of equity injections and by State-owned or policy banks (see Section 6.3.3.1) in the form of loans, with the result that a significant part of the equity and debt of the NEV producers is State-owned or granted in application of the Government's policies.

The support by the Government is not channelled only through State-owned companies, but also through State funds (see in particular Section 6.5.1). In the 2017 Automobile Plan, the Automobile Industry Joint Fund is mentioned. The Automobile Industry Joint Fund was created in 2015[3523]. Its shareholders include the China Association of Automobile Manufacturers ('*CAAM*'), the National Natural Science Foundation of China and eight NEV producers: FAW

3519 See at: https://www.businessinsider.com/nio-first-limousine-fights-tesla-vw-and-sedan-china-bankruptcy-competitor-pioneer?r=US&IR=T (accessed on 15 June 2023).

3520 See at: https://www.caixinglobal.com/2021-04-07/bond-defaulter-brilliance-auto-faces-lawsuits-over-457-million-101686383.html (accessed on 15 June 2023).

3521 See at: https://www.linkedin.com/pulse/brilliance-group-bankruptcy-reorganization-took-substantial-jack-duan (accessed on 15 June 2023).

3522 See at: https://www.caixinglobal.com/2021-04-07/bond-defaulter-brilliance-auto-faces-lawsuits-over-457-million-101686383.html (accessed on 15 June 2023).

3523 See at: https://www.gov.cn/xinwen/2015-04/08/content_2843699.htm (accessed on 15 June 2023).

Group, Dongfeng, SAIC, Chang'an, GAC, Brilliance, JAC Motors and Sinotruck[3524]. The CAAM, according to its articles of association, "*adheres to the overall leadership of the Communist Party of China and, in accordance with the provisions of the Constitution of the Communist Party of China, establishes organizations of the Communist Party of China*"[3525]. Moreover, the CAAM acknowledges "*the business guidance, supervision and management of* [...] *party structure leading organs*" and that "*the leading organ of the Party structure is the Party Committee of the State-owned Assets Supervision and Administration Commission of the State Council*"[3526]. The National Natural Science Foundation of China was established following the approval of the State Council and it is still "*under the correct leadership of the Party Central Committee and the State Council, with the support of relevant departments of the State Council*"[3527]. All the eight NEV producers which are shareholders in the Automobile Industry Joint Fund are State-owned. The role of the Automobile Industry Joint Fund is to "*unite the strength of China's automotive industry enterprises, promote the close integration of production, education and research* [...] *especially to invest in basic research and technology major innovation*"[3528]. Therefore, the Government, which already directs the NEV producers towards certain R&D objectives through the technical requirements for benefitting from the purchase subsidy, the purchase tax exemption and the positive points under the Dual-Credit System, also offers direct support for R&D investments to NEV producers.

Moreover, another way the Government has to indirectly fund NEV producers is the monetisation of NEV credits under the Dual-Credit Policy. Once the Government created the system whereby negative points can be offset by purchasing positive points from performing companies, these positive points acquire a value. Many NEV producers, including Tesla, BYD and Li Auto, have increased corporate profits or made up for losses by selling NEV credits for money. Taking Li Auto as an example, according to its 2021 financial report, the company sold a total of about 70 000 positive points and the related income was RMB 200 million (EUR 26,2 million)[3529]. This shows how a system created by the Government contributes to the income of the most performing and, as seen in Section 22.4.3, largest NEV producers.

A link to the Government in the form of equity injection or other direct support is important especially for NEV start-ups, because closer ties with the Government often translate into better access to bank loans, notably from State owned and policy banks. This was the case of NIO. In July 2020, after the agreement with the Anhui province for the move of its headquarters mentioned in Section 22.4.1, the local branches of six State-owned banks[3530] agreed to extend RMB 10.4 billion credit lines to the loss-making company in a ceremony attended by a member

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3524 Information on the shareholders of the Automobile Industry Joint Fund is available at: https://www.gov.cn/xinwen/2015-04/08/content_2843699.htm.

3525 Article 3, CAAM's articles of association, available at: http://www.caam.org.cn/chn/2/cate_8/con_5223238.html (accessed on 15 June 2023).

3526 Article 3, CAAM's articles of association.

3527 See at: https://www.nsfc.gov.cn/publish/portal0/jgsz/01/ (accessed on 15 June 2023).

3528 See at: https://www.gov.cn/xinwen/2015-04/08/content_2843699.htm (accessed on 15 June 2023).

3529 See at: https://auto.sina.com.cn/zz/wb/2022-07-08/detail-imizirav2545819.shtml (accessed on 15 June 2023).

3530 CCB - Anhui Branch, ICBC - Anhui Branch, BOC - Anhui Branch, ABC - Anhui Branch, Industrial Bank - Hefei Branch and China Merchants Bank - Hefei Branch

of the Hefei CCP Committee[3531]. NIO raised a further USD 430 million through sales of its American depositary shares in June, with Tencent Holdings, NIO's second-largest shareholder in which the Government holds a 'golden share'[3532], buying a quarter of them.

Finally, the Government's financial support is not inconsequential as it has the potential to direct the companies towards the policy objectives of the Government. One of them is the market penetration of Chinese NEV producers abroad, following the 'Going Out' policy. Even if at the end of 2022 the Government stopped its purchase subsidy scheme in the attempt to scale back its intervention in the domestic market, at the same time it promised its full support to ensure the successful entry of Chinese companies into markets abroad, notably the EU market: "*The Ministry of Commerce will continue to work with relevant departments to support new energy vehicle companies to speed up the construction of overseas marketing and after-sales service networks and increase brand promotion efforts. Encourage qualified overseas institutions of Chinese-funded banks to provide overseas consumer financial products. Research to expand export transportation channels and transport new energy vehicles through China-Europe trains*"[3533].

In any case, the fact that the Government stopped granting the purchase subsidy to NEV producers does not mean that such type of support stopped completely in China. Indeed, lower-level authorities continued similar schemes in the form of State funds to support NEV producers and the spread of NEVs among companies and consumers. China's 2023 WTO subsidies notification includes several examples of such funds[3534]. The following State funds and subsidies dedicated to NEV producers and to the spread of the use of NEVs among companies can be enumerated:

- the Fund for New Energy Passenger Vehicles, established by the Beijing municipality, to support NEV producers through grants. Despite its duration being foreseen from 2017 until June 2019, disbursements in application of the Fund continued in 2021 and 2022;
- the Fund for Promotion and Using of New Energy Light Trucks, established by the Beijing municipality, to encourage the use of NEVs among eligible road freight transport companies through rewards offered as of 2020;
- the Special Fund for the Development of Renewable and New Energy, established by the Shanghai municipality, to support NEVs producers through rewards offered for the period 2022-2026;
- the Fund for Promotion and Application of New Energy Vehicles, established by the city of Suzhou, in the Jiangsu province, to promote the use of NEVs among companies through grants in 2021 and 2022. It was also available to consumers;

3531 See at: https://www.nio.cn/news/nio-china-obtains-rmb104-billion-credit-facility (accessed on 15 June 2023).

3532 See at: https://www.ft.com/content/65e60815-c5a0-4c4a-bcec-4af0f76462de (accessed on 15 June 2023).

3533 See at: https://www.sophus3.com/sophus3-briefing-paper-chinese-auto-brands-in-europe-part-1/?privacy=updated (accessed on 15 June 2023).

3534 English version available at : https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=297108,292271,287660,283505,277069,276413,271399,267414,262149,257989&CurrentCatalogueIdIndex=0&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=False&HasSpanishRecord=False (accessed on 15 June 2023).

- the Subsidy Fund for Hydrogen Fuel Cell Industry, established by the city of Changshu, in the Jiangsu province, to support producers of FCEVs through grants in the period 2020-2022;
- the Subsidy for Promotion and Application of New Energy Vehicles, established by the city of Yangzhou, in the Jiangsu province, to promote the use of NEVs by eligible companies through grants as of 2019. It is also available to consumers;
- the Special Fund for Promotion and Application of New Energy Vehicles, established by the Hunan province, to promote the use of NEVs among eligible companies through grants. Despite its duration been foreseen from 2016 to 2020, disbursements in application of the Special Fund still occurred in 2021 and 2022;
- the Fund for New Energy Vehicle Promotion and Application Projects, established by the city of Xi'an, in the Shaanxi province, to support companies purchasing NEVs through rewards as of 2019;
- the Reward Fund for Promotion and Using of New Energy Taxi, established by the city of Hohhot, in the Inner Mongolia autonomous region, to encourage the use of NEVs among taxi operators through grants in the period 2021-2025; and
- the Subsidy for Charging Infrastructure Construction and Supporting Operation Services of New Energy Vehicles, established by the Guangxi Zhuang autonomous region, to support companies active in the deployment of the NEV charging infrastructure through grants in the period 2019-2022.

The following are instead examples of State funds dedicated to fostering the use of NEVs by consumers:

- the Fund for Promotion and Application of New Energy Vehicles, established by the city of Suzhou, in the Jiangsu province, to promote the use of NEVs among consumers through grants in 2021 and 2022. It was also available to companies;
- the Subsidy for Promotion and Application of New Energy Vehicles, established by the city of Yangzhou, in the Jiangsu province, to promote the use of NEVs by eligible consumers through grants as of 2019. It is also available to companies;
- the Subsidy for Promotion and Using of New Energy Vehicles, established by the Hainan province, to promote the use of NEVs among consumers through grants as of 2017; and
- the Fund for Promotion and Application of New Energy Vehicles, established by the city of Qingdao, in the Shandong province, to support consumers purchasing NEVs through grants. Despite the duration been foreseen from 2018 and 2020, in 2022 there were still disbursements in application of the Fund.

These funds and subsidies show that, despite the termination of the purchase subsidy scheme managed by the central Government, support for the purchase of NEVs is available to both companies and consumers offered by lower administrative levels of government. In addition, some of the funds and subsidies listed above appear to support directly NEV producers, thus adding further support layers to the investments ensured by State-owned companies and policy banks.

22.5. CHAPTER SUMMARY

This chapter shows that the lack of tradition and technology to produce ICEs brought China to develop a regulatory background for the transition to the NEV industry as early as 2005 (see Section 22.3.1). Having started this transition in advance compared to other countries, the Government is seeking the opportunity to make China the powerhouse for the production of NEVs to be exported to developed economies, reversing the roles in the ICE market. Leveraging on a comprehensive framework of support from the central and local Government throughout the value chain – from essential raw materials to batteries to the NEVs – China turned into the first producer and exporter of NEVs in the world as a matter of national interest (see Sections 22.2.1-22.2.3). Thus, after creating the industry, the Government put in place a set of measures that, when considered together, allows it to exercise control over the growth of the industry and to direct its development (see Section 22.3). At the heart of it, the Dual-Credit Policy (see Section 22.3.10) rewards NEV producers fulfilling production targets and sanctions companies failing to meet them, compelling them to offset their 'debits' by purchasing 'credits' from performing companies or the performing companies altogether. This focus on production favours larger companies and the consolidation of the market. At the same time, the Government controls also the sales by suppressing the prices of the NEV types and models it intends to favour through a purchase subsidy paid to the NEV producers (see Section 22.3.3) and a purchase tax exemption (see Section 22.3.14). The termination of the purchase subsidy granted by the central Government at the end of 2022 did not prevent the continuation of other programs and of similar subsidies granted by lower administrative levels of government (see Section 22.3.3). Indeed, the provinces and the main cities appear to be in competition amongst them to have NEV producers in their area, in order to attract employment, revenues and the attention of the central Government. Thus, many local Governments and local branches of State-owned banks provided the investments needed by NEV start-ups to develop their operations, so that considerable shares of the equity and debt of NEV producers have become State-owned (see in particular Sections 22.3.16 and 22.4.5). Against this background, the intervention of the Government at both central and local level is liable to give rise to market distortions in the Chinese NEV and battery industries.

TERMINOLOGY AND ABBREVIATIONS[3535]

13th FYP	13th Five Years Plan (for National Economic and Social Development)
14th Circular Economy FYP	14th Five Years Plan for Developing the Circular Economy
14th FYP	14th Five Years Plan (the People's Republic of China 14th FiveYears Plan for National Economic and Social Development and Long-Range Objectives for 2035)
14th FYP on Revitalization of Special Areas	Revitalization and Development Plan for Special Areas during the 14th Five Years Plan Period
14th Green Development FYP	14th Five Years Plan on Industrial Green Development
14th Raw Materials FYP	14th Five Years Plan on Developing Raw Materials Industry
14th FYP Recommendations	Recommendations for the Formulation of the 14th Five Years Plan (2021-2025) for National Economic and Social Development and the Long-Range Objectives Through the Year 2035
14th Shandong FYP on Steel	14th Five Years Plan (2021-25) on Developing Steel industry in Shandong Province
2016 Guiding Opinions	Guiding Opinions of the General Office of the State Council on Promoting the Restructuring and Reorganization of Central Enterprises
2017 Automobile Plan	Medium and Long-Term Development Plan for the Automobile Industry issued by the MIIT, NDRC and MOST
2017 Battery Action Plan	Action Plan for Promoting the Development of the Automotive Power Battery Industry
2018 Government Reform Plan	Plan for Deepening the Reform of Party and State Agencies issued by the Central Committee of the CCP
3rd Plenum Decision	Decision of the Central Committee of the CCP on Some Major Issues Concerning Comprehensively Deepening the Reform
ABC	Agricultural Bank of China
ACF	Aluminium Converter Foil
ACFTU	All-China Federation of Trade Unions
ADB	Agricultural Development Bank of China
AI	Artificial Intelligence
AMCs	Asset Management Companies
AML	Anti-Monopoly Law
AMRs	Administrations for Market Regulation

[3535] Non-exhaustive.

Anhui 14th Automobile Provincial Plan	High-quality Development Plan of Automobile Industry in Anhui Province during the 14th Five Years Plan
AoA	Articles of Association
ASEAN	the Association of Southeast Asian Nations
ATP	Assembly, Testing and Packaging
Automobile Industry Joint Fund	Joint Fund for the Automobile Industry Innovation and Development
Banking Law	Law of the PRC on Commercial Banks
Basic Regulation	Regulation (EU) 2016/1036 of the European Parliament and the Council of 8 June 2016 on protection against dumped imports from countries not members of the European Union
BEVs	Battery electric vehicles
Big Fund	National Integrated Circuit Industry Investment Fund
BOC	Bank of China
BOCOM	Bank of Communications
BRI or **OBOR**	Belt and Road Initiative
CAAC	Civil Aviation Administration of China
CAAM	China Association of Automobile Manufacturers
CAC	Cyberspace Administration of China
CAP	Protocol on the Accession of the PRC to the WTO
Carbon Peaking Plan	Building Materials Industry Carbon Peaking Implementation Plan
CBIRC	China Banking and Insurance Regulatory Commission
CBRC	China Banking Regulatory Commission
CCB	China Construction Bank
CCP or **Party**	Chinese Communist Party
CCP Constitution	Constitution of the Chinese Communist Party
CDB	China Development Bank
CEC	China Enterprise Confederation
CEDA	China Enterprise Directors Association
CEIC	China Energy Investment Corporation
Central Huijin	Central Huijin Investment Ltd.
CERD	the UN Committee on the Elimination of Racial Discrimination
Chaozhou Action Plan	Chaozhou City's Action Plan for Building a Hundred-billion-yuan Level Ceramic Industry Cluster
Chaozhou Implementation Plan	Implementation Plan for Promoting the High-quality Development of the Ceramic Industry in Chaozhou City
China or **PRC**	People's Republic of China
China Minmetals	China Minmetals Corporation
China Railway	China State Railway Group Co., Ltd.

Chongqing Plan	Chongqing municipality's 14th Five Years Plan on the High-Quality Development of Manufacturing Industry
CII	Critical Information Infrastructure
CIRC	China Insurance Regulatory Commission
CISA	Chinese Iron and Steel Association
CJV Law	Law on Sino-Foreign Contractual Joint Ventures
Classification GO	Guiding Opinions on the Functional Definition and Classification of State-owned Enterprises
CNC	Computer Numerical Control
CNCRC	China National Cotton Reserves Corporation
CNIA	China Non-Ferrous Metals Industry Association
CNFA	China Non-Ferrous Metals Fabrication Industry Association
CNR	China Northern Rail Group
COMAC	Commercial Aircraft Corporation of China, Ltd.
Complaints Rules	Rules on Handling Complaints of Foreign Invested Enterprises
Concession Rules	Legal framework for infrastructure and public utility-related work and service concessions, covering energy, transportation, water conservancy, environmental protection, municipal engineering and other fields of infrastructure and public utilities within Chinese territory
Constitution	Constitution of the People's Republic of China
Corporate Governance GO	State Council Guiding Opinions on SOE Corporate Governance from April 2017
CPC	Centralised Procurement Catalogue
CPPCC	Chinese People's Political Consultative Conference
CRCC	China Railway Construction Corporation Limited
CREC	China Railway Engineering Corporation
CRRC	CRRC Corporation Limited
CRRC ZELC	CRRC Zhuzhou Electronic Locomotives Co. Ltd.
CRSC	China Railway Signal & Communication Corporation
CSCS	Corporate Social Credit System
CSIS	Center for Strategic and International Studies
CSR	China Southern Rail Group
CSRC	China Securities Regulatory Commission
Decision No. 40	The Decision of the State Council Regarding Promulgating the Implementation of Interim Provisions on the Promotion of Industrial Restructuring
Draft GPL Revision	Second draft revision of the GPL
Draft TBL Revision	Revised version of the TBL
DRCs	Development and Reform Commissions

Dual-Credit-Policy	Parallel Management Method for Corporate Average Fuel Consumption and New Energy Vehicles Credits for Passenger Vehicles
ECL	Export Control Law
EIT	Enterprise Income Tax
EJV Law	Law on Sino-Foreign Equity Joint Ventures
EMUs	Electric multiple unit trains
Encouraged FI Catalogue	Catalogue of Industries for Encouraged Foreign Investment
EPL	Employment Protection Legislation
ETS	Emissions Trading System
EUCCC	European Chamber of Commerce in China
EXIM	Export-Import Bank
FAIC	Financial Asset Investment Company
FCEVs	Fuel Cell Electric Vehicles
FIEs	Foreign Invested Enterprises
FIL	Foreign Investment Law
FI Negative List	Special Administrative Measures (Negative List) for Foreign Investment Access
FITs	Feed-in Tariffs
Foreign Investment Catalogue	Catalogue of Industries for Guiding Foreign Investment
FSDC	Financial Stability and Development Committee
Fujian Plan	14th Five Years Plan on the High-Quality Development of Manufacturing Industry in Fujian Province
Fujian 2022-2025 NEV Provincial Plan	Development Plan of New Energy Automobile Industry in Fujian Province (2022-2025)
FYPs	Five Years Plans
Gansu Plan	Gansu 14th Raw Material Industry Development Plan
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEM	Growth Enterprise Market
General Program of the CCP Constitution	General Program of the Constitution of the Chinese Communist Party
GGFs	Government Guidance Funds
GFSEC	Global Forum on Steel Excess Capacity
GHP	Geothermal Heat Pumps
GPA	WTO Agreement on Government Procurement
GPL	Government Procurement Law

Guangdong Plan	Guangdong's 14th FYP on the High-Quality Development of Manufacturing Industry
Guangdong 14th EV Infrastructure Provincial Plan	14th Five Years Plan for the Development of Electric Vehicle Charging Infrastructure in Guangdong Province
Guangxi Zhuang 14th NEV Regional Plan	14th Five Years Plan for the Development of the New Energy Automobile Industry in the Guangxi Zhuang Autonomous Region
Guiding Opinion or **GO**	Various pieces of legislation in the form of Guiding Opinion concerning an issue specified in the corresponding section of the Report
Guizhou 14th NEV Provincial Plan	the 14th Five Years Development Plan for the New Energy Automobile Industry in Guizhou Province
Hefei 14th NEV Local Plan	14th Five Years Plan for the Development of New Energy Vehicle Industry in Hefei
Henan Plan	Henan Steel, Aluminium, Coal, Chemical and Cement Industry Upgrade and Development Action Plan 2018-2020
HEVs	Hybrid electric vehicles
H_2EVs	Hydrogen electric vehicles
HKSE	Hong Kong Stock Exchange
HNTEs	High- and New-Technology Enterprises
HREEs	Heavy Rare Earth Elements
HRF	Hot-Rolled Flat products
Huawei	Huawei Technologies Co., Ltd.
ICs	Integrated Circuits
ICBC	Industrial and Commercial Bank of China
ICEs	Internal Combustion Engine Vehicles
ICT	Information and Communication Technologies
IDM	Integrated Device Manufacturer
IEA	International Energy Agency
IGBT	Insulated-gate Bipolar Transitors
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
IMF	International Monetary Fund
INE	Shanghai International Energy Exchange
IOM	International Organisation for Migration
IP	Intellectual Property
IPOs	Initial Public Offerings
IPR	Intellectual Property Right
IT	Information Technology
ITIF	Information Technology & Innovation Foundation
ITUC	International Trade Union Confederation

Jiangsu 14th NEV Provincial Plan	14th Five Years New Energy Vehicle Industry Development Plan of the Jiangsu Province
Jiangsu Steel Industry Work Plan	Jiangsu Work Plan for Layout Optimization in the Transformation and Upgrading of the Steel Industry Throughout the Province
Jiangxi Plan	14th Five Years Plan for the High-Quality Development of Non-Ferrous Metals Industry of Jiangxi Province
JRC	Commission's Joint Research Centre
JVs	Joint Ventures
LGFVs	Local Government Financing Vehicles
Little Giants Initiative	Small and medium-sized companies selected for government support in line with corresponding legislation and policies
LME	London Metals Exchange
LPR	Loan Prime Rate
LREEs	Light Rare Earth Elements
LSFO	Low Sulphur Fuel Oil
LTAR	Less Than Adequate Remuneration
LUR	Land Use Rights
M&A	Mergers and Acquisitions
MA Negative List	Market Access Negative List
Made in China 2025	Made in China 2025 Initiative
Made in China 2025 Roadmap	Made in China 2025 Roadmap, issued originally in 2015
MCA	Ministry of Civil Affairs
MEE	Ministry of Ecology and Environment
MEMS	Microelectromechanical Systems
MEP	Ministry of Environmental Protection
Mergers GO	Guiding Opinions on Accelerating the Promotion of Mergers and Reorganizations of Enterprises in Key Industries
MFA	Ministry of Foreign Affairs
MFN	Most-Favoured Nation [treatment]
MIIT	Ministry of Industry and Information Technology
MLCC	Multilayer Ceramic Capacitors
MLR	Ministry of Land and Resources
MOF	Ministry of Finance
MOFCOM	Ministry of Commerce
MOHRSS	Ministry of Human Resources and Social Security
MOST	Ministry of Science and Technology
MPS	Ministry of Public Security
MSS	Ministry of State Security
MW	Megawatt

NAFMII	National Association of Financial Market Institutional Investors
NASSP	National Administration of State Secret Protection
NBER	National Bureau of Economic Research
NDC	Nationally Determined Contribution
NDRC	National Development and Reform Commission
NEA	National Energy Administration
NEVs	New Energy Vehicles
NEV Plan 2012-2020	Energy-Saving and New Energy Vehicle Industry Development Plan (2012-2020)
NEV Plan 2021-2035	New Energy Vehicle Industry Development Plan (2021-2035)
NFRA	National Financial Regulatory Administration
NFSRA	National Food and Strategic Reserves Administration
NMSAC	National Manufacturing Strategic Advisory Committee
Notice	Various pieces of legislation in the form of a Notice concerning an issue specified in the corresponding section of the Report
NPC	National People's Congress
NPLs	Non-Performing Loans
NRTA	National Radio and Television Administration
OCS	Organic Coated Steel
OECD	Organisation for Economic Co-operation and Development
OHCHR	United Nations High Commissioner for Human Rights
OSCCA	Office of State Commercial Cryptography Administration
OTC transactions	Over-the-counter transactions
P/E	Price-to-Earnings
Party or **CCP**	Chinese Communist Party
PBOC	People's Bank of China
PHEVs	Plug-in Hybrid Electric Vehicles
Pingshan NEV Local Plan	Brand-building Plan for the New Energy Automobile Industry in Pingshan District, Shenzhen
POEs	Privately Owned Enterprises
PPPs	Public-Private Partnerships
PPT	Prescribed Procurement Threshold
PRC or **China**	People's Republic of China
Project Approval Catalogue	Catalogue of Investment Projects Subject to Government Approval
PSBC	Postal Savings Bank of China
Purchase Subsidy Notice	Notice on the Pilot Subsidy Scheme for the Private Purchase of New Energy Vehicles
Purchase Tax Exemption Announcement	Announcement No. 10 of 2023 on the Continuation and Optimization of the New Energy Vehicle Purchase Tax Reduction Policy

PV	Photovoltaic
RCAP	Regulatory Consistency Assessment Program
R&D	Research and Development
REEVs	Range Extended Electric Vehicles
RMB	Chinese Yuan (renminbi)
Restructuring Catalogue	NDRC's Catalogue for Guiding Industrial Restructuring
S&T MLP	National Medium- and Long-term Program for Science and Technology Development (2006-2020)
SAFE	State Administration of Foreign Exchange
SAMR	State Administration for Market Regulation
SASAC	State Assets Supervision and Administration Commission
SASAC Notice	Notice on Forwarding the Plan of the State-owned Assets Supervision and Administration Commission of the State Council on Promoting the Transformation of Functions by Primarily Focusing on Capital Management
SASAC Regulation	Interim Regulations on Supervision and Management of State-owned Assets of Enterprises, adopted at the Eighth Executive Meeting of the State Council on 13 May 2003
SEEE	Shanghai Environment and Energy Exchange
SEIs	Strategic Emerging Industries
Semis	Semi-finished Products
Shandong Plan	14th Five Years Plan on Aluminium Industry Development of the Shangdong Province
Shanghai NEV Municipal Plan	Implementation Plan for Accelerating the Development of the New Energy Vehicle Industry in Shanghai (2021-2025)
Shanghai Plan	14th Five Years Plan for the Development of the Chemical Industry Zone in Shanghai
SHFE	Shanghai Futures Exchange
SHSE	Shanghai Stock Exchange
SIA	Chinese Semiconductor Industry Association
SIC	State Information Center
Sinosure	China Export & Credit Insurance Corporation
SMEs	Small and Medium-sized Enterprises
SMIC	Semiconductor Manufacturing International Corp.
SOEs	State-owned Enterprises
SOE Law	Law on the State-Owned Assets of Enterprises
SPC	Supreme People's Court
SPIC	State Power Investment Corporation
SRB	States Reserve Bureau
SSSR	Supply-Side Structural Reform
STAR	Shanghai Stock Exchange Science and Technology Innovation Board

STEs	State Trading Enterprises
SZSE	Shenzhen Stock Exchange
TBL	Tendering and Bidding Law
TDI	Trade Defence Instrument
Rail Fund	China Railway Development Fund Co., Ltd.
Three-year Plan	Three-year Action Plan on SOE Reforms 2020-2022
UNFCCC	United Nations Framework Convention on Climate Change
UNIFE	Association of the European Rail Industry
USCC	United States – China Economic and Security Review Commission
US ITA	US International Trade Administration
USTR	US Trade Representative
VAT	Value Added Tax
VLSI	Very Large Scale Integrated Circuit
WMPs	Wealth Management Products
Working Party Report	WTO Report of the Working Party on the Accession of China
WTO	World Trade Organization
XUAR	the Xinjiang Uygur Autonomous Region
Zhejiang 14th NEV Provincial Plan	14th Five Years Plan for the Development of the New Energy Automobile Industry in the Zhejiang Province
ZTE	ZTE Corporation