

STATE-OWNED ENTERPRISES IN THE CHINESE ECONOMY TODAY:

Role, Reform, and Evolution



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TABLE OF CONTENTS

EXECUTIVE SUMMARY	iii
1. INTRODUCCION	1
2. INFLUENCE OF SOEs IN THE CHINESE DOMESTIC MARKET	2
3. OVERVIEW OF SOEs IN CHINA	8
3.1 A Brief Reform History of SOEs	8
3.2 Identification of SOEs in China	9
4. SOCIAL ROLE AND TYPES OF SOEs	11
4.1 SOEs' Social Responsibilities	11
4.2 Differences between Local SOEs and Central SOEs	12
5. DECISION-MAKING PROCESS OF CHINESE SOEs	13
5.1 The TCOI Policy	13
5.1.1 <i>Decision-making Bodies</i>	13
5.1.2 <i>Decision Content</i>	14
5.1.3 <i>Decision Consequences</i>	14
5.2 Implications of the TCOI Policy	15
5.3 Pressure Imposed on SOEs' Decision Process	16
6. CONCLUSION	18
APPENDIX A: STATISTICS OF LOCAL SOEs AND CENTRAL SOEs	20
APPENDIX B: LIST OF CENTRAL SOEs UNDER SASAC BY INDUSTRY	24

EXECUTIVE SUMMARY

As the private sector in China developed and matured, the economic weight of state-owned enterprises (SOEs)¹ has decreased significantly in terms of GDP profile, employment, total assets, and total revenue. As a result, the character and practices of many SOEs has shifted, taking on a more commercial orientation. Nevertheless, Chinese SOEs remain both a significant feature of China's economy and an important vehicle through which the central government pursues national policy objectives. Moreover, SOEs continue to dominate many key sectors, several of which are of interest for Alberta, such as energy, chemicals, and banking. It is essential for Canadians and Albertans to understand these strategic shifts in order to not only mount a targeted and effective business approach in China, but also develop a forward-looking agenda, particularly in light of the potential Canada-China free trade agreement that is currently under discussion.

SOEs are utilized and managed at the central, provincial, and local levels. In fact, the number of **central** SOEs, that is, those managed by the State-Owned Assets Supervision and Administration Commission (SASAC), steadily decreased from 149 in 2008 to 102 at the end of 2016.² Moreover, the capital structure of these centralized SOEs has shifted: 66% of these 102 companies are now listed on stock exchanges domestically and/or internationally. Most of these central SOEs are also engaged in diverse activities beyond their core businesses.

Despite being either totally or majority owned by the Chinese government and therefore accountable for reflecting and advancing government policies,

Chinese SOEs often behave as independent entities. Over the years, SOEs began to compete amongst themselves, even in sectors where centralized SOEs have enjoyed relative dominance, such as the petroleum extraction, telecommunications, and financial sectors. As a consequence, these firms also face increasing competition in the domestic market from both domestic and foreign-invested private firms.

The latest development in the Chinese government's "Go Global" strategy, which began in the mid-90s, is the proposed "Belt and Road Initiative" (previously called One Belt, One Road), which was first announced in 2013. Through enhanced global infrastructure, capacity-building, and selected trade and investment arrangements, the Belt and Road initiative will link China to Europe, the Middle East, Eurasia, and Africa through the Silk Road Economic Belt and the Maritime Silk Road. The Belt and Road initiative initially generated vigorous encouragement for domestic investors, particularly SOEs, to "go abroad" in order to acquire strategic assets overseas. Overall, the initiative has been met with interest from both domestic investors looking to expand their businesses abroad and target countries that hope to attract Chinese investment. However, both the scope and practical application of this project are not yet clear, and China's "Go Global" strategy had mixed performance in its earlier stages. Although the central government urged SOEs and domestic investors to "go abroad," most SOEs were not fully prepared for competition from their international rivals, nor were they prepared to manage local politics or sensitivities. Given increased pressure from the national

¹ In this paper, SOEs refers to state-owned enterprises in the non-financial sector unless specifically indicated.

² National Bureau of Statistic of China "China Statistical Yearbook 2016" *People's Republic of China*, 2016. <http://www.stats.gov.cn/tjsj/ndsj/2016/indexeh.htm>

government as well as the broadening of challenges of overseas investment and multinational business strategies, the success of multinational SOE operations has become more uncertain and unpredictable. The Belt and Road Initiative will be a further test of China's blended state- and-market-directed approach to international business.

Chinese SOEs utilize a relatively conventional and market-oriented logic to doing business, albeit to varying degrees. Often, political and economic objectives coincide, or at least coexist successfully. In more recent years, senior SOE executives who make critical investment decisions have taken the commercial risks and consequences of any business failure into fuller consideration than their predecessors did, largely because these SOE executives know they will be accountable for both business performance and policy ramifications.

Financial performance assessments of acquisitions – and perhaps especially for overseas acquisitions – are now crucial for the national government. These acquisitions emerged as a key test to determine the extent to which an SOE is accountable for commercial performance. In the event of setbacks, bailouts do still occur, which may in turn reward failure and create market distortions. Generally speaking, however, the availability of these bailouts can no longer be presumed. In sectors that are considered to be strategic priorities, the central government remains more patient with underperforming SOEs. However, these companies are broadly expected to make money – or at least not lose it.

In preparation for business negotiations with Chinese SOEs, foreign analysts, traders, investors, financial institutions, and government negotiators should reflect on the embedded risks and complications arising from the centralized decision-making processes of SOEs. If necessary, a case-by-case study, supported by the most accurate possible data, would be ideal in terms of identifying SOE objectives (both political and economic) as well as the character of the specific corporate governance structures for individual SOEs. We also recommend that the Canadian and Albertan approach to trade discussions, in potential future free trade negotiations with China, take into consideration the role and scope of SOE-related issues outlined in this paper series.

1. INTRODUCTION

Any actionable strategy developed for Canada or Alberta intended to build an economic relationship with China must take into account both the enduring and powerful role of SOEs in the Chinese economy and their influence on government strategies (whether on matters of procurement decisions, in the conduct of international business, or in the context of trade and investment policy negotiations). Amid rampant political and media controversies, both real and perceived, policymakers will require a concrete understanding of what SOEs are, how SOEs have evolved in recent years, the role of SOEs in the Chinese economy, and the internal decision-making processes of these companies.

The evolution of SOEs will be particularly relevant for Canadian trade negotiators, specifically Albertan officials that wish to build a strategy in China, as well as foreign companies doing business in or with China. The most pertinent aspects of SOE operations for Canadian policymakers, negotiators, and business people are changes in SOEs' (a) relationship with the Chinese government and the Communist Party of China; (b) position in relation to the growth of China's private sector; and (c) adoption, however uneven, of a stronger commercial orientation. Canada and Alberta will need to grasp these dynamics to develop viable trade and investment strategies. Likewise, exploratory talks on a possible Canada-China Free-Trade Agreement (FTA) will require a robust knowledge of SOE operations and commercial orientation. SOEs are of special importance to Alberta, given the relative dominance SOEs enjoy not only in the energy and resource sector, but other sectors of promise for Alberta such as agriculture and select service industries.

The realities of present-day SOEs have shifted over the past twenty years, and a number of specific reforms

have taken place both in relation to overseas investment policies and practices and domestically within China. While it is unclear how sufficient these reforms are – for instance, how much more fully “commercial” SOE operations have actually become – these changes do have important ramifications for China and its economic partners abroad. Chinese SOEs retain significant regulatory and financial favour compared to their Canadian counterparts, and this discrepancy has resulted in a somewhat uneven playing field. Canadian negotiators may find leverage in several issues that specifically affect SOE investors, and these issues will be subsequently explored in Paper II of this series. Paper I will overview Chinese SOEs' identification, the role of these companies in, and their impact on, the Chinese economy, and the evolution of their governance structures and decision-making processes.

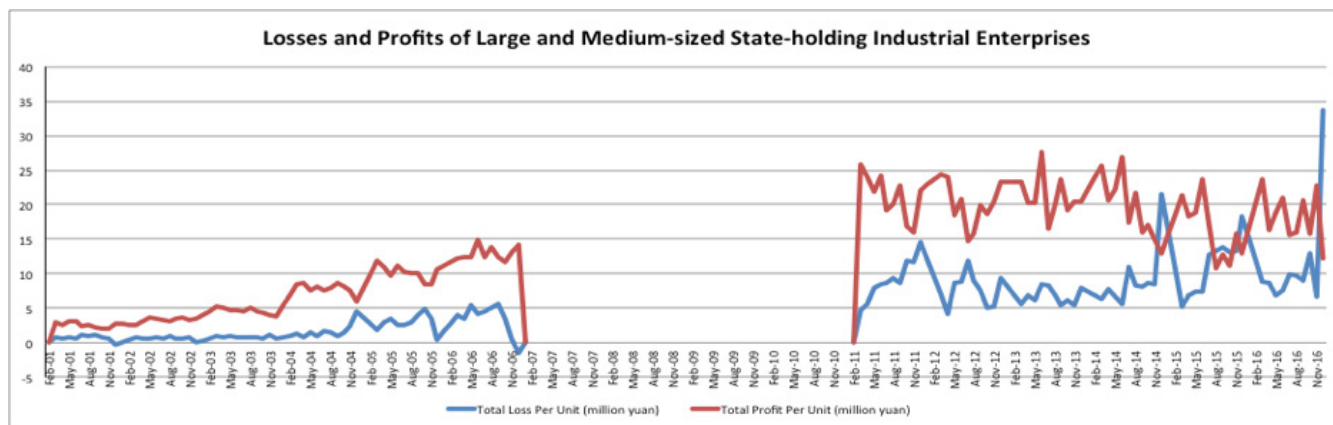
2. INFLUENCE OF SOEs IN THE CHINESE DOMESTIC MARKET

This section examines central and local SOEs by both industry and region, and compares SOEs with private enterprises to demonstrate the significance and impact of SOEs in the Chinese domestic market. To determine how responsive SOEs are to market forces, we first consider the profitability of SOEs in China. As shown in Figure 1 (below), with respect to the performances of large- and medium-sized industrial SOEs in China before 2007, and again after 2010, both losses and profits prior to the 2008 financial crisis showed an upward trend, with profits exceeding losses, and the disparity between the two growing larger over time. However, beginning in 2011, both the upward trend and the disparity between profits and losses disappears. Meanwhile, both time series became more volatile than in the pre-crisis period. Moreover, since May 2014 the disparity between profits and losses was reduced, and the losses eventually surpassed profits on four

separate occasions. Changes in SOE profitability over time signal the progressive exposure of SOEs to market forces, and reinforce the need for a commercial orientation for SOEs to remain profitable. Unfortunately, data from the 2007-2009 financial crisis period is not available at the National Bureau of Statistics of China, so there is a gap in the data between these years.

This subsection begins with the industrial distribution of the 102 central SOEs under SASAC, as shown in Figure 2 below. A detailed industry classification of each firm is also included in Appendix B. Figure 2 below suggests that more than one-third of central SOEs are based in the electric power and coal, aerospace and military, and machinery industries, which are all are considered to have political and strategic importance for the central Chinese government.

Figure 1: Average Losses and Profits of Large- and Medium-sized SOEs over Time³

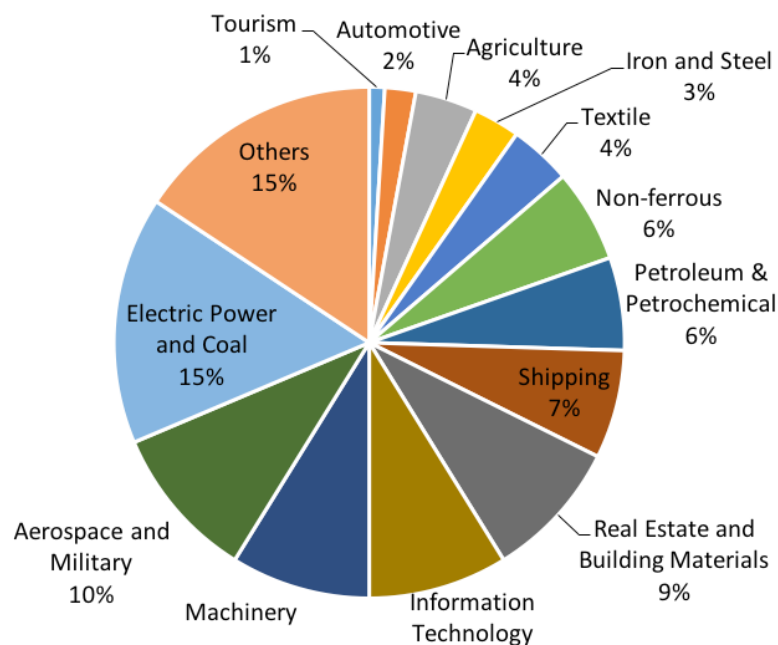


Source: National Bureau of Statistics of China

³ Data is not available for the 07-09 financial crisis period.

⁴ National Bureau of Statistics of China, "China Statistical Yearbook 2016."

Figure 2: Industrial Distribution of Central SOEs under SASAC



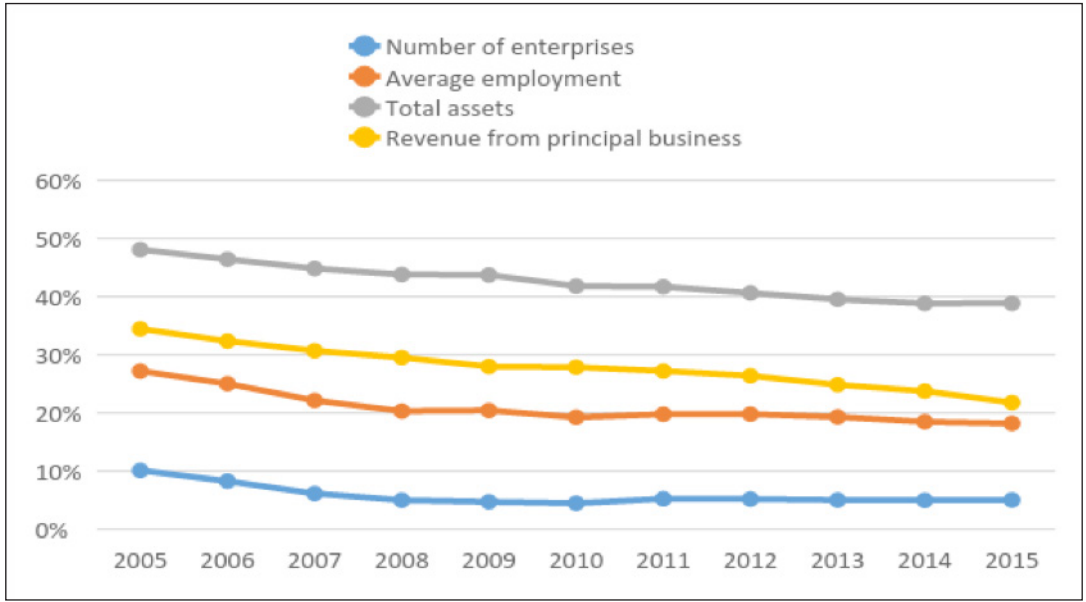
Source: SASAC

In contrast to the portrayal of SOEs in popular media, the profile of Chinese SOEs in the overall Chinese domestic economy has generally diminished, despite the relative dominance of SOEs in several key sectors. According to the 2016 China Statistical Yearbook, the total number of SOEs decreased from 10% to 5% of the total industrial sector from 2005 to 2015. Meanwhile, the proportion of SOEs to total industrial assets decreased from 48.1% to 38.8%, and the contribution of SOEs to total employment fell from 27.2% to 18.2% (Figure 3). This coincides with a decline in SOE share of revenue from principal business lines, which

dropped from 34.4% to 21.8% in the same ten-year period. Consequently, the share of SOEs in comparison to the entire national economy declined to less than 30%, while the share of non-state owned organizations increased to about 70% of the total GDP.⁵ In contrast to the declining dominance of SOEs, the non-state sector became significantly more dynamic, and is now the main source of employment and innovation: the private sector accounted for approximately 78% of total employment and over 70% of expenditures in research and development in 2015.

⁵ For the main functions of SASAC, see: State-Owned Assets Supervision and Administration Commission of the State Council, “Main Functions,” *The People’s Republic of China*, accessed February 17, 2017. <http://en.sasac.gov.cn/n1408028/n1408521/index.html>.

Figure 3: Share of SOEs in All Industrial Enterprises



Source: China Statistical Yearbooks (2006 - 2016)

Figure 3 shows that the share of SOEs in total number of enterprises, employment, assets, and revenue has begun to decline. This trend is largely affected by two factors: first, the Chinese government undertook several restructuring strategies, initiated approximately two decades ago, as outlined below. Second, companies under other forms of ownership experienced rapid growth during the same time period. The proportion of domestic employment by non-SOEs continues to grow, which suggests that the private sector absorbed a large number of employees that were laid off as the result of the SOE restructuring initiatives. However, SOEs still play a key role in several sectors deemed ‘strategic’ by the Chinese Government. Such sectors are those seen to be

politically significant, and include power generation and distribution, defense, civil aviation, waterway transport, petroleum and petrochemical, telecommunication, and coal. In addition, the government maintains control over a number of economically significant industries, such as the automobile, equipment manufacturing, information technology, construction, iron and steel, and nonferrous metals sectors, which are all considered to be ‘pillar industries’ of the Chinese economy. The government, as a matter of official policy, intends to maintain sole ownership or apply absolute control over only what it considers to be strategic industries, but also maintains relatively strong control over the pillar industries.

Table 1: SOEs in Selected Industries (%)

	NUMBER OF FIRMS		TOTAL ASSETS		REVENUE FROM PRINCIPAL BUSINESS		ANNUAL AVERAGE EMPLOYEES	
	2006	2015	2006	2015	2006	2015	2006	2015
MINING & WASHING OF COAL	13	15.8	82.3	74	67.6	58.4	72.3	72.4
EXTRACTION OF PETROLEUM & NATURAL GAS	49.7	58.9	98.4	94.5	99	83.7	97.9	97.4
MANUFACTURE OF FOOD	8.5	3.5	19.4	7.6	12.8	5.2	13.1	6.4
MANUFACTURE OF TOBACCO	79.9	79.7	99.2	98.8	99.3	99.3	94.6	96.2
MANUFACTURE OF TEXTILES	2.9	1	10.7	4.6	6.2	2.2	10.4	3.5
PROCESSING OF PETROLEUM, COKING & NUCLEAR FUEL	10.2	11.1	65.1	51.2	75.6	59.4	49.5	48.5
MANUFACTURE OF CHEMICAL PRODUCTS	7.5	4.6	42.1	27.8	30.3	14.9	29.8	17.7
MANUFACTURE OF TRANSPORT EQUIPMENT (auto, railway, ship, aerospace & other)	12.7	6.6	58.2	48.7	51.4	41	39.6	30
MANUFACTURE OF COMMUNICATION EQUIPMENT	7.8	4.2	15.3	17.5	7.8	8.8	8.9	7.7
PRODUCTION & SUPPLY OF ELECTRIC POWER & HEAT POWER	67.3	63.1	88.6	89.4	90.8	92.9	87.6	88.6

Source: China Statistical Yearbooks 2017, 2006

Table 1 presents the share of SOEs in selected industries in China. Due to SOE reform and market liberalization, as well as the far-reaching impacts of globalization, it appears that the prevalence of Chinese SOEs has begun to recede in certain important economic sectors such as manufacturing of food, chemical products, and transport equipment. This trend also includes labour intensive industries, despite the sensitive aspect of employment in China. It appears

that SOEs retreated from the more competitive and more labour-intensive industries, maintaining less than 10% of total assets in sectors such as textiles, food, and communication equipment.

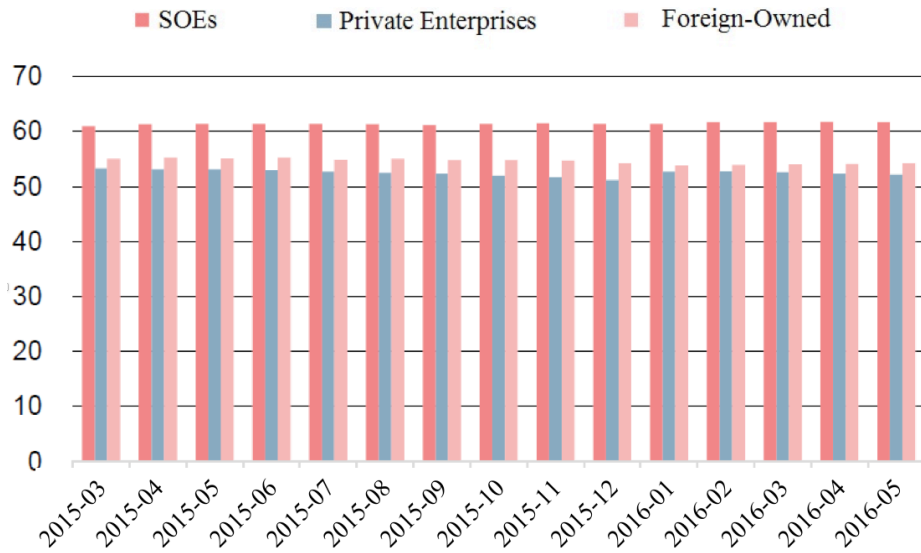
A comparison of Chinese SOEs with the non-state-owned sector is required to develop a deeper understanding of SOE influence in domestic markets. The distinction between state and non-state is, at times,

still unclear, as many “private” companies maintain close working relationships with government. However, in recent years a clear trend toward greater separation between SOEs and private corporations has emerged, and this trend will likely impact business operations in various sectors and industries.

Figure 4 compares the debt-to-asset ratio of SOEs with that of other forms of enterprises. It demonstrates that SOEs tend to bear larger financial burdens. However, SOEs play a fundamental and strategic role in the

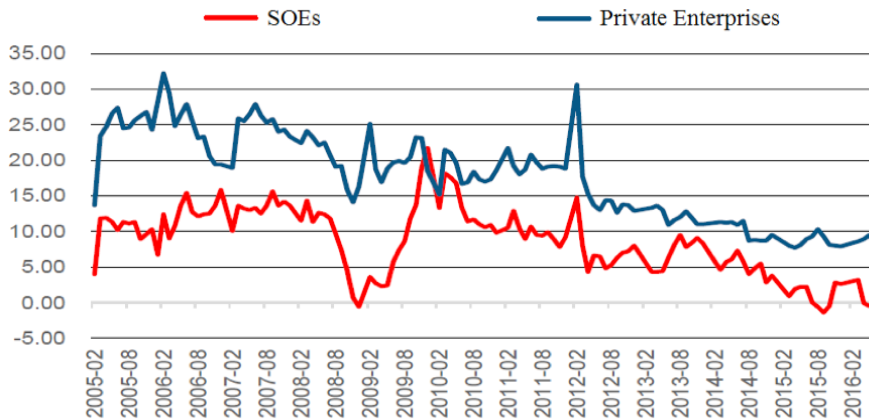
economy as drivers of industrial innovation, and often SOEs undertake necessary projects for the country’s development that may or may not be financially profitable in the short run (such as building airports and subway systems, and establishing economic development zones). While not always successful, these initiatives are intended to reduce the economic development disparities between regions and industries. Consistent with Figure 4, Figure 5 (below) shows that compared with private enterprises, the growth rate of industrial added-value for SOEs is consistently lower.

Figure 4: Debt to Assets Ratio: SOEs vs. Other Types of Enterprises



Source: R&D Department at China Securities

Figure 5: Growth Rate of Industrial Added Value



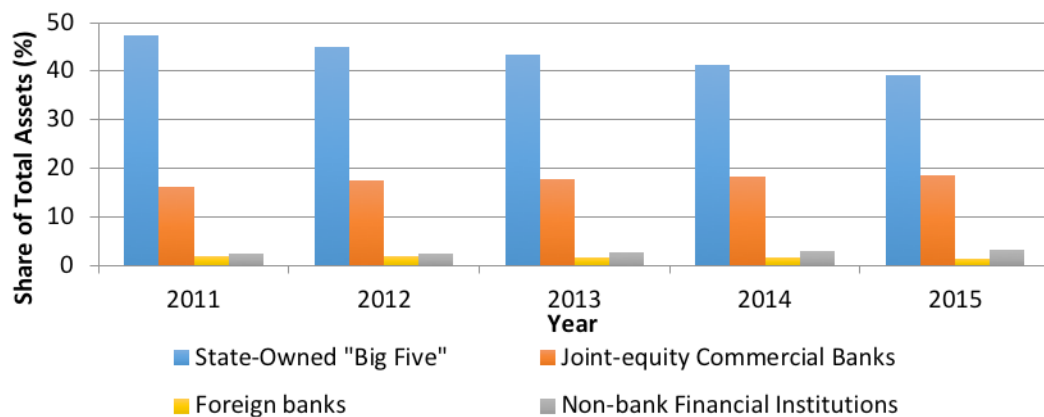
Source: R&D Department at China Securities

The landscape of the financial sector in China is rapidly evolving, but relatively opaque: for example, the emergence of shadow banks and other various financial institutions and products, which developed concurrently with China's internet financing system, demonstrates a complex and dynamic economy that is unlike the domestic markets of other large economies. However, one important feature of traditional finance remains - that is, large commercial banks continue to dominate the Chinese financial system, and the market power of the banking system is still highly concentrated. In 2015 the "big five" banks that are majority-owned and controlled by the state (i.e., the Industrial and Commercial Bank of China, China Construction Bank, Bank of China, Agricultural Bank of China, and Bank of Communications) represented about 40% of the banking sector's total assets, and 41% of profits. The "big five" are followed by national joint-equity commercial banks, in which the central or local governments usually take up substantial stakes.

It was only in 2014 that China officially launched a pilot project to allow the establishment of banks owned entirely by private companies. According to the China Banking Regulation Commission, by the end of 2016 there were 17 established or approved privately-owned commercial banks, while the total number of branches of foreign banks and banks from Hong Kong, Macao, and Taiwan reached 121. Finally, non-bank financial institutions (insurance companies, securities firms, and asset management companies, etc.) in China are mainly operated by SOEs and government-linked companies, and make up a much smaller market share in China relative to the banking system.⁶

Figure 6 plots the share of total assets of four major sectors in China's financial system from 2011 to 2015. Notably, the figure illustrates that the share of the "big five" state-owned commercial banks has steadily decreased over the years, in spite of the absolute dominance of SOEs in the overall market.

Figure 6: Financial Sector Total Asset Shares by Ownership



Source: The Almanac of China's Finance and Banking 2016

⁶ Douglas J. Elliott and Kai Yan, "The Chinese Financial System: An Introduction and Overview," *The John L. Thornton China Center at Brookings*, July 2013.

3. OVERVIEW OF SOEs IN CHINA

There is no doubt China has made continuous efforts to reform or realign SOEs, although the thoroughness and success of these reforms is certainly debatable. This section provides a brief review of the reform history of

SOEs since China's "Opening Up and Reform" in 1978. This paper then discusses ways to identify or characterize these SOEs pre- and post-reform or realignment.

3.1 A BRIEF REFORM HISTORY OF SOEs

Between the Communist Party's takeover of China in 1949 and China's "Opening Up and Reform" initiative in 1978, SOEs were the only economic players. In the late 1970s the central government allowed private enterprises to be legally established in China, and the number of private enterprises grew from a handful to nearly one million by 1998.⁷ In the meantime, a series of SOE policy reforms took place alongside the surge of private enterprises that were being established. We divide these reforms into four phases:

The first phase of reform (1978-1984) aimed to motivate supervisory authority bodies to reform, and, in effect, modernize management systems. They did so by encouraging the entry of new firms, creating competition for SOEs. Specifically, individuals were allowed to operate private businesses, and SOEs were granted more flexibility and autonomy in their operations and management. Instead of transferring all profits to the state, SOEs were also able to retain a portion of their profits, and a taxation system was introduced. Foreign investment was no longer prohibited, and market principles were introduced gradually. However, central planning still dominated this period.

The second phase of reform (1985-1993) was characterized by the decentralization of state control. The provincial governments of certain regions became involved in business, leading to regionalized economic development strategies. More importantly, the government began to accept and even favour the separation of ownership and management of SOEs.

The third phase of reform (1994-2002) involved increased privatization, and witnessed a large wave of selloffs/transfers of SOEs' ownerships across the whole country. Preferential policies were endorsed to retain larger SOEs; meanwhile the majority of smaller SOEs were allowed to convert their ownership from governments to non-state entities, resulting in the sale of a large portion of SOEs to private investors. "Above-scale" SOEs (i.e., with annual sales revenue CNY 5 million) fell from 118,000 in 1995 to 24,961 in 2004.⁸

The fourth phase of the reform (2003-present) focused on governance and oversight. This phase began with the establishment of SASAC, which aimed to centralize the administration of national-level SOEs and promote mergers and acquisitions among large SOEs.⁹

⁷ David Ahlstrom and Garry D. Bruton, "Learning from successful local private firms in China: Establishing legitimacy," *The Academy of Management Executive* Vol. 15, No.1 (2001): pp. 72-83.

⁸ Gary Jefferson, "State-Owned Enterprise in China: Reform, Performance, and Prospects," *Brandeis University: Working Paper Series*, No. 109 (2017).

⁹ See SASAC, "Main Functions," *The People's Republic of China*, accessed February 17, 2017. <http://en.sasac.gov.cn/n1408028/n1408521/index.html>.

Through these processes of consolidation (rather than privatization), reform in this most recent phase led to a decreasing number of large SOEs. Between the founding of SASAC in 2003 and the end of 2016, the number of central SOEs declined from 196 to 102.¹⁰ On the other hand, SOEs became increasingly concentrated in sectors considered either related to national security or critical to the lifelines of the national economy. SOEs maintain absolute control over sectors such as defense, power grids, petroleum and petrochemicals, telecommunication, coal, civil aviation, and shipping.

Additionally, in nine basic and pillar industries – equipment manufacturing, automotive, electronic information, construction, iron and steel, nonferrous metals, chemicals, survey and design, and technology – SOEs maintain control.¹¹ In these sectors, the government has introduced special rules and regulations for SOEs in terms of administrative oversight, personnel appointment, regulation, designation, etc. We will discuss the decision-making process and favourable treatment in these industries in subsequent sections.

3.2 IDENTIFICATION OF SOEs IN CHINA

The ownership and control of corporate entities often differs between countries. In China, identifying SOEs can be complicated due in part to the difficulty of determining if the state has real or merely partial or perceived control. The complex web of SOE subsidiaries, particularly those for which the state is not the largest shareholder of the company, can further obscure identification. If such enterprises come to Canada, including Alberta, they may appear (and even be identified) as private enterprises, even though varying measures of state involvement may be embedded. This subsection provides several identification methods that can be referred to in assessing the degree of “commercial orientation” of a particular SOE. The most relevant, current, and “official” reference is SASAC’s *June 2016 Measures for the Supervision and Administration of the Transaction of State owned Assets*.¹²

SASAC divides SOEs into four categories:

1. Enterprises that are wholly funded by individual government units, e.g. SASAC, and those that are 100% owned by these units, directly or indirectly;
2. Enterprises jointly owned by two or more governmental units with a total share of more than 50%, and where one of these units is the largest shareholder;

3. Subsidiary enterprises funded by the above two types of enterprises and in which they hold more than 50% of shares; and
4. Enterprises in which the state is largest shareholder, and though it owns less than 50% of shares actually controls the enterprise through explicit agreement or other arrangements.

SASAC’s categorization emphasizes the degree of actual control by the state. In the context of the Chinese economy, actual control can be understood as the state’s intervention in the management of the enterprise through the appointment of senior executives and in the issuance and implementation of regulations. For instance, Communist Party secretaries that are appointed to an SOE’s parent company may also be appointed as chairman or director of the subsidiary company, in which the state may not be the largest shareholder. However, all directors are expected to bear in mind the interests of the country and the Party.¹³

For practical (statistical, registration, and analytical) reasons, other government units make efforts to classify SOEs by different standards. For instance, the National Bureau of Statistics of the People’s Republic (NBS) employs

¹⁰ For more on this see: The State Council, “China to Further Regroup Central State-owned Enterprises,” *The People’s Republic of China*, August 23, 2016. http://english.gov.cn/policies/policy_watch/2016/08/23/content_281475423704259.htm.

¹¹ Jefferson, “State-Owned Enterprise in China”

¹² SASAC, “Main Functions.”

¹³ Jia Xinting and Roman Tomasic, *Corporate Governance and Resource Security in China: The Transformation of China’s Global Resources Companies* (New York: Routledge, 2010).

its own categorization by counting all firms with a state participation as SOEs. In comparison, the framework of the Organisation for Economic Cooperation and Development (OECD) emphasizes direct ownership of more than 50%, and, more importantly, defines “control” by voting rights and board-of-directors appointment powers, both of which refer to the management of the enterprises. The key difference between classifications hinges on whether enterprises where the state is not the largest shareholder are classified as SOEs or not. While the NBS definition is convenient for statistical purposes, the categorization used by SASAC is more relevant for international negotiations on trade or investment matters because it better captures the nebulous control exerted on companies that are not majority-owned by the state.

For example, to better identify whether a state-invested Chinese firm entering Alberta is an SOE or not, policymakers should investigate if, and in what way, the state is actively involved in the management of the firm. Specifically, the state is actively involved in an enterprise if the government issues and implements regulations governing the management of the enterprise, or if the government directly appoints executive directors and members of the senior management team.¹⁴ Another indication that can be used to determine the extent of government or Party control is to check if such an enterprise is a subsidiary of central SOEs or large local SOEs.

In practice, this question may be partly moot. Most countries receiving Chinese foreign direct investment (FDI) will reserve their own criteria for determining degrees of state control – and therefore the treatment or oversight they will receive on entry. For instance, the 2013 amendments to the Investment Canada Act afforded Canada’s Industry Minister wide discretion to make this determination in light of economic or national security considerations.¹⁵

In conclusion, for any international negotiations involving Chinese SOEs, both the ownership and actual control should be considered. If the state owns the largest share of an enterprise – as in CNCP, CNOOC, or SINOPEC - this enterprise should be treated as an SOE. In the case of enterprises that the state does not dominate in shares, but explicitly exercises actual or *de facto* control, it would be more reasonable to regard them as *de facto* SOEs.

¹⁴ SASAC, “Main Functions.”

¹⁵ Alicia Quesnel, Jody Wivcharuk, and Brittney LaBranche, “Important Changes to the Investment Canada Act –New Review Thresholds for Investments by WTO Investors that are not SOEs,” *Burnet, Duckworth & Palmer Law*, accessed 25 July, 2017. http://www.bdplaw.com/content/uploads/2015/04/ICA-changes-for-Investments-by-WTO-Investors_3021558_4-2.pdf

4. SOCIAL ROLE AND TYPES OF SOEs

While China's SOEs have evolved significantly over the last few decades, SOEs still bear different missions than companies in other jurisdictions. It will be unwise to treat all SOEs equally, or to presume equivalent mandates or behaviour patterns. According to the primary functions and original mandates of these companies, some SOEs are established more for public

welfare or national security functions, while other SOEs are more profit-seeking and act like private firms. In this sense, SOEs operate with political and strategic goals on top of profit-maximization ones. This section provides a brief introduction to SOEs' roles in "social responsibility," and presents some statistics that compare central SOEs with local SOEs.

4.1 SOEs' SOCIAL RESPONSIBILITIES

On top of the important roles in China's economic development, SOEs bear enormous social obligations for which they are gradually being held to greater account. For instance, the dominance of SOEs in the telecommunication sector has facilitated the realization of connectivity projects across the country, including in the less-developed regions. SOEs in the energy sector apply a price inversion that guarantees the electricity and energy supply for the population and enterprises. Moreover, SOEs contribute more to social security funds than private companies, provide healthcare services to their employees, and contribute retirement benefits to over 17 million retired workers. Their involvement in thousands of social institutions, such as workplaces, schools (primary, middle, and high schools), and hospitals involve significant financial costs each year. Housing benefits and other fringe benefits, including life insurance, meal subsidies,¹⁶ transportation subsidies, etc., are other substantial expenditures.

Before China's latest economic reforms and its recent preoccupations over excess capacity in some sectors,

many SOEs employed additional workers, even to the point of redundancy. This was done largely for political reasons – mainly to ensure social stability through economic opportunity. Since then, and as part of the rationalization and realignment exercises, SOEs have had to establish "Re-Employment Centers" and pay one-third of minimum salaries and insurance for laid-off employees until they find new jobs. Besides these more direct social interventions, SOEs are also considerably involved in research and development projects and the dissemination of new technologies in various sectors of the country. It is estimated that more than 1.2 million of China's technical personnel are employed by SOEs, and that SOEs held over 214,000 patents at the end of 2011. Of significance for Albertans, over 75% of national energy technology development is coordinated by SOEs.

As key players in the economy and public services, SOEs are also the principal partners of the Chinese government in promoting industrial upgrading and sustainable urbanization.

¹⁶ Most SOEs and their subsidiaries provide on-site dining services for their employees at discounted/subsidized prices, and some SOEs simply give their employees extra money for food. A similar meaning applies to transportation subsidies.

However, China still faces considerable criticism and skepticism about the accountability of SOEs, both at home and abroad, for issues such as environmental and consumer protection: a large proportion of the country's greenhouse gas emissions are caused by Chinese SOEs' activities. While this may simply reflect the consequence of SOEs' continuing pre-eminence in energy, chemical, and heavy industry sectors, nevertheless, SOEs often have less-than-satisfactory environmental performance compared

to private firms.¹⁷ Again, the trend is for such a record to be subject to greater public account – or at the very least, greater scrutiny – including greater scrutiny of the record of Chinese investments abroad, whether in developing nations in Africa and Latin America or in countries like Canada, where corporate social responsibility standards are high. Certainly, the arguments over the success of China's social responsibility roles and policies at home and abroad, and the quality of follow-up, remain unresolved.

4.2 DIFFERENCES BETWEEN LOCAL SOEs AND CENTRAL SOEs

Central SOEs include those enterprises for which the SASAC is the sole shareholder on behalf of the government. They also include state-authorized investment institutions that are solely owned by the government, such as a parent group company of the listed firm, state-owned asset management companies, and investment companies that are used as vehicles of SASAC to control listed SOEs. In addition, central SOEs include all kinds of state holding (listed) companies. Central SOEs concentrate in strategically important sectors such as defense, power grids, petroleum and petrochemicals, telecommunication, etc.¹⁸

Compared with central SOEs, local SOEs tend to be much smaller and less strategically important. As local SOEs are more commercially oriented, they act more like private enterprises and are spread over a variety of different industries. In recent years, most provinces have witnessed an increase in the number of SOEs, although local and commercially-oriented SOEs tend to concentrate in developed provinces like Beijing, Shanghai, and Guangdong. In past decades, central SOEs used to have greater total assets than their local counterparts, but after 2010 this trend reversed and local SOEs lead the growth of total assets. This reversal implies that local SOEs have become significantly

more important for the growth of the overall Chinese economy. Furthermore, central SOEs are generally much larger in terms of both size and influence, but recent trends suggest that local SOEs have begun to influence the long-term strength of China's economy, too. Detailed statistics regarding central SOEs and local SOEs are contained in Appendix A.

Compared with private enterprises, both local SOEs and central SOEs enjoy preferential treatment from government: examples include the relative ease with which they may secure licensing approvals, gain guaranteed government contracts, and access low-cost bank financing. However, the degree of such preferential policies varies among SOEs. Since SOEs bear social responsibility roles, central SOEs and influential local SOEs may require particular attention, as government intervention can complicate their behaviour, making predictions difficult. Future trade negotiations with China will certainly involve issues of non-discrimination, transparency, and the consequences for business conditions experienced by foreign companies in China, should Canadian firms seek to compete with SOEs in China's domestic market. In short, the favours enjoyed by SOEs are symbolic of what other countries view as an "uneven playing field."

¹⁷ Hua Wang and Yanhong Jin, "Ownership and Industrial Pollution Control: Evidence from China," *Annual Conference of American Agricultural Economics Association*, May 2002.

¹⁸ In Appendix B, we list all 102 SOEs by industry.

5. DECISION-MAKING PROCESS OF CHINESE SOEs

While the above sections describe SOE operations and behavior from a macro perspective, this section explores the micro decision-making processes within SOEs. The objective of this section is to (a) develop insights into the processes underway in China to decentralize and devolve decision-making; and (b) establish whether, and to what extent, China's state-sector firms are operating as traditional commercial enterprises in the way Western governments may understand. In other words, this section examines day-to-day oversight controls in company operations, and whether these controls represent greater flexibility for operational management in comparison to traditional commercial enterprises,

or whether, and in what circumstances, such guidelines may create obstacles for SOE operations.

On July 15, 2010, the Chinese government released the “Opinions on Further Encouraging State Owned Enterprises to Implement the ‘Three Critical and One Important’ Collective Decision-Making Policy” (hereafter, the TCOI Policy). This is a key document in the reform process, which delineates the scope and procedures for Chinese SOEs to make significant decisions, including investments abroad. Individual SOEs formulate their own detailed guidelines based on the TCOI Policy.¹⁹

5.1 THE TCOI POLICY

Not every decision regarding SOE operations is a target of the aforementioned TCOI Policy: only those that are above a certain value threshold, and that have major impact on the company's strategic direction or structural changes, are regarded as “Critical and Important” decisions, and are to be made collectively. Specifically, the “Three Critical” decisions refer to important corporate, personnel appointment, and project decisions, while the “One Important” decision refers to decisions relating to significant oversized capital expenditure. Those “Critical and Important” decisions often involve government supervision, and such decisions are heavily influenced or guided by the Chinese government's objectives. In the following subsections, we provide some details of the TCOI Policy and its implications.

5.1.1 Decision Content

The critical and important decisions that are mentioned in the TCOI Policy, and that distinguish SOEs from a traditional commercial firm as would be understood in the West, feature direct involvement in the fulfillment of external goals, such as national security and stability.

1) The first of the “Three Critical” decisions applies to politically-oriented situations, such as major decisions regarding the implementation of any Party-level or state-level schemes and initiatives, laws, regulations, policies, or decrees. It also applies to decisions which concern the maintenance of security and stability of state assets, as well as the Party's presence within the SOEs. Decisions regarding these issues are deemed ‘critical’ decisions, and are more likely to be manifestations of state control than related to profitability.

¹⁹ For reference, see provision six in SASAC, “Main Functions.”

2) The second of the “Three Critical” decisions covers mid- or high-level personnel appointments or removals. The use of “appointment” instead of “employment” emphasizes that the hiring of management team members (e.g. a CEO) for SOEs is analogous to the appointment of government officials.²⁰

3) Critical project decisions (the third of the “Three Critical” decisions) refer to decisions on projects or technologies that affect assets and profits of the company, as well as production, financing, and investment plans. Major decisions regarding corporate expansion, bankruptcy, restructuring, M&A, asset adjustments, property rights transfers, external investments, profit redistribution, and institutional restructuring are also deemed critical, and are therefore collectively decided through the board.

4) The “One Important” decision refers to any monetary decisions that are not within the company’s total annual budget authorized by the company or SASAC. Decisions regarding the use or transfer of those out-of-budget funds are under the collective decision-making regime. For example, large donations or sponsorships made to other entities by the SOEs fall under this decision.

5.1.2 Decision-making Bodies

Depending on the specific corporate structures of SOEs, TCOI decisions are to be made collectively, through their corporate decision-making bodies – i.e. an SOE’s Party Committee or Party Organization, or board of directors (board) – or management teams when the board is unavailable. Compared with private firms, SOEs emphasize the role of the Party Committee, which should be consulted first regarding any TCOI decision-making. The Committee is also responsible for advising or reporting any company activities that deviate from the

policy, rules, and laws of the Party and the country. Two aspects of government involvement in SOE decision-making have complicated the SOE reform process:

First, the owners of SOEs have significant political power and often impose political objectives on SOEs. As previously noted, the nature of corporations as profit-seeking entities is complicated by the involvement of the national Chinese government. In performance evaluation literature, scholars place significant weight on the social and political goals of SOEs, such as in the national energy security sector.²¹ For example, the three state-owned Chinese oil companies (CNPC, with its listed arm, PetroChina; Sinopec; and CNOOC) have the energy security of China as their primary company objectives.

Second, despite this social and political responsibility, some SOEs do achieve microeconomic performance levels comparable to that of private firms – and increasingly their senior executives are expected to do so. However, the political and career aspirations of SOE executives, taken together with a two-tier management structure that gives the government influence (that is, through SASAC (government) and the SOEs management body (corporate)), mean that it is still common to find cases where SOE board decisions deviate from the objective of optimizing economic or commercial performance of the firm.

5.1.3 Decision Consequences

Despite the political pressures, national policy objectives, and the social responsibility roles of SOEs, SOE decision-makers do consider their profitability as part of the authority bestowed on them as senior managers. Essentially, this is a Chinese SOE version of what might be called risk-management practice in North America: decision-makers often face a variety of complex expectations for political and economic performance. The performance bonus or promotion of these executives

²⁰ Moreover, the appointment decision is often made by the Central Organization Ministry, and should be in consultation with the Discipline Inspection and Supervision Department in the SOE or SASAC.

²¹ For example, Table 84.2 in Xiao-yang Zhu, “Chapter 84: Performance Evaluation of State-Owned Enterprises in China: A Case of Petroleum Industry” in *Proceedings of 2012 3rd International Asia Conference on Industrial and Management Innovation*, ed. Runliang Du (New York, USA: Springer) assigns a weight of 26.53 out of 100 to evaluation of social and political goals within the three giant oil SOEs (17.33/100 is assigned to the energy security goal). Based on the author’s evaluating system, PetroChina is found to be the best among the three SOEs in terms of overall performance, and the ranking is “consistent with that of the micro-economic performance level.”

is based on their competence as party members, at least as much (if not more) than their competence as company managers. Profit maximization is sometimes less important for these executives when they make management or investment decisions, particularly when economic and political objectives conflict. For instance, in pursuit of “energy security” a Chinese SOE might be induced to pay higher-than-market prices and accept higher-than-normal economic risk based on long-term strategic considerations – in contrast to the more typical high-and-quick returns model of investment, as would likely be employed by a North American or European investor that is conscious of shareholder expectations.

This example may simply indicate Chinese investors are more strategic and more patient in their business planning. Nonetheless, this approach does create and aggravate inefficiency among Chinese SOEs in terms of resource allocation: strategic objectives can be too vague

to be evaluated in the short term, and this sometimes provides room for either excuses or the inclusion of SOE executives’ personal agendas, which directly or indirectly may promote corruption. In fact, damage to state-owned assets often stems from irresponsible or seemingly irrational decisions, which can in turn lead to the imposition of strict penalties.²²

In sum, SOE systems and practices may indicate whether the SOE is in fact “commercially oriented.” Management performance in private firms is directly, and almost exclusively, evaluated by the profits and losses of the firms. For a Chinese SOE, these aspects of performance are only part of the evaluation criteria for SOE decision-makers (whether these be its board members or CEOs and other senior executives). Moreover, annual performance evaluations are used to assess TCOI Policy practices within SOEs, and are considered a part of “Party Integrity” and anti-corruption campaigns.²³

5.2 SOE DECISION-MAKING IN PRACTICE

The decision-making authority regarding SOE operations and management has decentralized in recent years as a result of ongoing reforms, and this authority is now passed down from government bureaus (ostensibly external from the SOEs) to professional management teams within SOEs. Meanwhile, the tone of SOEs’ objectives has gradually shifted from a political orientation towards a more economic-focused approach; that is, the direction of SOE operations is now guided more by market forces than by the government. The implication of this change is twofold:

First, while the pace and scope of change will vary among individual SOEs and across different regions, **the corporate structure** of Chinese SOEs has become more similar to that of most modern internationally-operating

corporations. This trend is evident in several ways: for example, a substantial number of SOEs are now publicly listed or have listed arms. Public listing diversifies the ownership of the company and lessens government control, both of which indicate a more market-oriented business practice. According to a 25 January 2017 statement released by SASAC, 83 out of 102 central SOEs have established standard boards of directors, and another four SOEs are in the process of setting up such boards. Statistics for local SOE ownership and revenues are scarce, but it is reasonable to believe that reform within local SOEs is also in progress. The China-Canada Investment Tracker database of the China Institute suggests that SOEs generally make their overseas investments through listed arms, which function as

²² Indeed, there appears to be something of a crackdown in progress. According to an official document released on August 23, 2016 by the State Council, a “responsibility investigating system” is to be established for SOEs, which refers to the process to establish lifetime accountability for those who made influential decisions during their terms as SOE executives.

²³ This complication is determined by the SOEs supervising system that acts similarly to the internal and external audit system for corporate financial reporting. SOEs are supervised by internal and external agencies. The internal supervision agency of an SOE is directly governed by the SASAC’s SOE Supervisory Panels, while subject to indirect governance of the external Party and State supervision agencies through the middle supervision panels of SASAC.

buffers that minimize, if not entirely avoid, many political influences. Moreover, given the decentralization of SOEs, decisions not included in the TCOI Policy are entirely up to the SOEs or their subsidiaries, with no necessary involvement by the government.

On the other hand (and as a cautionary note), major decisions involving overseas investments, for example, are usually determined by the board of SOE headquarters, and are subject to the approval of the government (more specifically SASAC). Senior managers and board members within the SOEs are usually party members, and are appointed by the government rather than hired in the market. As both business executives and politicians or political figures, these board members have “mixed identities”. These managers and board members should be viewed, and

perhaps also treated, partly as government officials during negotiations that involve or impact Chinese SOE operations in China or Canada. For example, the Chinese government may retain both the ability and disposition to influence an SOE’s decision to pursue a potential investment abroad. Particularly as of late, the government has been concerned with the risk associated with a number of investments made by Chinese SOEs overseas. The government may also retain the right to approve or reject incoming or outgoing investments of significant scale or strategic importance. Even if the investment is approved, the government reserves the right to restrict capital inflow or outflow on whatever terms or conditions it deems important: such capital outflow restrictions were evident in advance of the 19th Party Congress in October 2017, in a national effort to stabilize a depreciating yuan.

5.3 PRESSURE IMPOSED ON SOEs’ DECISION PROCESS

Shaped by over three decades of reform, Chinese SOEs remain essential to the Chinese economy and retain economic dominance in a select number of key sectors. Despite the substantive contributions made by SOEs in areas such as employment, taxation, production, and innovation, ongoing criticism in and outside of China has focused on the real or alleged low efficiency, corruption, or lack of transparency of these SOEs. Additionally, the belief that these SOEs are too politically involved, as well as the real or perceived preferential treatment extended to SOEs and the consequent adverse effects on the competitive environment for other foreign firms, continues to influence SOE reform in China. Criticism from China’s international trading partners, and indeed even within China, has created internal domestic pressure to position SOEs toward a more commercial orientation than in the past. Sources of these pressures are summarized below:

1) **Top-down pressure** refers to pressure from the Chinese government to reform SOEs. Chinese SOEs have evolved and progressed, particularly in terms of decision-making authority and operating efficiency. Such changes are largely the consequence of a shift from “state-operated” to “state-owned” and the establishment

in SOEs of a modern corporate structure. In many cases, political considerations are now unnecessary or irrelevant in areas that are not directly related to national security or the health of the national economy. However, SOE reform is far from complete: SOEs still enjoy dominance, and sometimes a monopoly position, in many industries, and this dominance has in turn resulted in many problems, including resource misallocation and overcapacity. These two issues are now the government’s main concerns for future SOE reform: the proposed supply-side structural reform and other related policies will impose top-down pressures on SOEs to further commercialize.

2) **Bottom-up and Competition-driven pressures** refer to entry and competition pressures from the private sector and the market. As demonstrated in Section 2, the private sector’s share of China’s overall economy and outward FDI has gradually increased. The prosperity of the private sector has imposed substantial pressure on SOEs and the government from the bottom up: appeals from the private sector, both domestic and foreign, for a more even playing field have forced the government to lower or remove entry barriers for private firms in certain industries (the oil industry for instance), a

trend anticipated to continue as the economy grows and develops. On the other hand, the Chinese private sector possesses higher efficiency in terms of resource allocation, value chain operations, and the absorption and simulation of innovation – all of which exert pressure on SOEs to compete in areas that are now open to private investors, either domestic or foreign. The bottom-up/competition-driven pressures will certainly contribute to the greater commercialization of Chinese SOEs.

3) **Foreign institutional pressure** refers to political and regulatory pressures that have accompanied China's "Go Global," Belt and Road, and various "indigenous innovation" initiatives, as voiced by most of China's major trade and investment partners. Scholars in sociology and international business studies have observed that foreign investment activities, particularly when Chinese corporations operate in developed host countries with higher standards of corporate governance, often result in SOE corporate governance reform.²³ This is because as Chinese SOEs enter the global market, they no longer have access to preferential treatment from host governments and therefore face intense competition from their foreign counterparts. Likewise, Chinese SOEs will encounter stringent national security reviews in developed countries, as well as public concerns over financial disclosure standards, which puts them at a relative disadvantage abroad. This environment can lead to further commercialization.

In conclusion, the Chinese government's attempt to decentralize SOE decision-making processes has granted SOEs more freedom to act independently and pursue commercial interests rather than political or social outcomes. However, SOEs and especially their senior executives are still closely supervised by the government. Given the variation between SOEs and the interpersonal complexity of these issues, a case-by-case approach is the most prudent way to assess the degree to which individual SOEs are reformed. For Canadian/Albertan companies operating in China or seeking to do business there, local professional advice will be essential

in gauging how and whether local SOE offices and managers have the *marge de manoeuvre* to make business decisions. In particular, technology partnerships, joint investment ventures, and/or procurement will require local professional advice. In many cases, "initial lobbying efforts should target both senior executives and members of the Party Committee," for instance, but the specifics of this lobbying will differ across industries, sectors, and corporations (Moser and Yu, 2014). As will be discussed in Paper II, SOE operations will likely be relevant for government-to-government dealings, including the potential Canada-China FTA under discussion.

²³ Michael J. Moser and Fu Yu, *Doing Business In China* (2008), Juris Publishing Inc., (2008).

6. CONCLUSION

SOEs have undergone a long journey to reform. Since 1978, SOE realignment and reform have taken place at the central, provincial, and local levels. In the 1990s, the Chinese government privatized a large number of small SOEs in an effort to modernize the management of these companies, and the government has devolved more and more decision-making authority from Beijing to both lower levels of government and traditional commercial boards. Yet, somewhat paradoxically, the Chinese government has actually recentralized some aspects of oversight and control for large and strategically important SOEs through SASAC, particularly in the post-2003 wake of anti-corruption campaigns, currency manipulation, and concerns over poor financial performance of some SOEs. The situation is undoubtedly complex.

Nevertheless, SOE reforms in many cases have had impressive results. These reforms touch *inter alia* on corporate governance, management practices, and decision-making arrangements. SOE reforms involve a considerable devolution of authority and day-to-day operational control. Though certainly not complete, and not without periodic setbacks and retrenchments, SOEs overall have shifted toward both a greater commercial orientation based on market forces and the adoption of professional management systems and standards more akin to internationally-accepted practices. However, on balance, SOEs do remain instruments of national policy, and this dual role as both government entities and profit-seeking firms can create ongoing confusion and tensions, both domestically and abroad.

After a significant period of reformation and restructure that lasted more than thirty years, SOEs retain an important, but declining, profile in China's economy, particularly relative to the growing private sector. At

the same time, SOEs have retained a critical position in some key sectors, such as petroleum extraction, telecommunications, capital construction, and finance. They have also retained a dual (and occasionally contending) role as both commercial entities and vehicles for policy advancement. SOEs continue to benefit from government-sponsored regulatory and preferential policies, extended in all the aforementioned key sectors, as well as from major projects and priority initiatives for China's Government and Party.

Despite SOE devolution and decentralization, central oversight over major investments, particularly those abroad or involving allegations of corruption, has been tightened. The Chinese government has also placed an effective hold on further substantive privatization and continued limits on certain incoming investments. The decision-makers of Chinese SOEs confront a range of challenges: as noted, there remains a fundamental tension between the role of SOEs as instruments of national policy, and the drive to make SOEs operate as commercial entities driven by market forces.

Central SOEs, such as those overseen by the SASAC, concentrate in a cluster of core industries. A number of these sectors are of interest to Alberta, notably energy, mining, and financial services. As will be discussed in the following paper, SOEs in other sectors, such as agri-food, forest products, tourism, and the knowledge sector, represent both opportunities and challenges for business development. SOEs face continued pressure to achieve transparent governance processes and structures for the purpose of business development or trade negotiations. This can entail both strategic and operational complications for foreign partners. A case-by-case approach is most sensible, and the recruitment of professional advice locally is to be recommended.

It is essential to understand what SOEs are and how they have evolved in order to develop an effective trade and investment strategy in China for Canada and Alberta, and indeed for individual industries and businesses, particularly in light of potential FTA negotiations. While this paper acts as a backgrounder on Chinese SOEs and their evolution, Paper II will provide a comprehensive study of the implications for Canada's and Alberta's trade and investment strategy both for China in general, and for the FTA negotiations in particular.

APPENDIX A

Table A1: Provincial Distribution of Local SOEs over Time

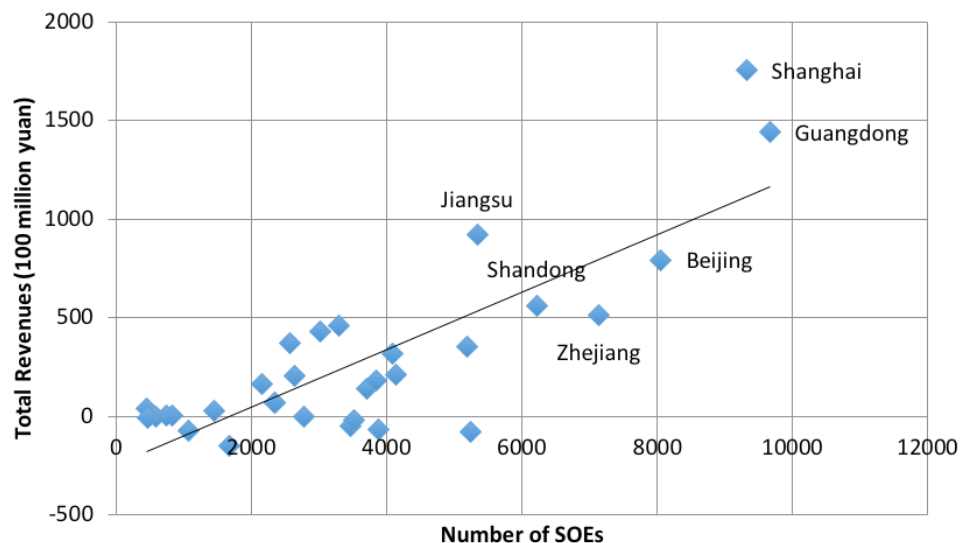
	2009		2012		2015	
	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK
GUANGDONG	7173	2	8355	2	9667	1
SHANGHAI	9640	1	9052	1	9329	2
BELJING	4867	3	6555	3	8053	3
ZHEJIANG	4545	4	6287	4	7144	4
SHANDONG	4351	5	5174	5	6217	5
JIANGSU	3355	10	4698	7	5342	6
SHANXI	4081	6	5121	6	5237	7
fujian	3427	9	4376	8	5183	8
TIANJIN	3469	8	4033	9	4132	9
SICHUAN	2862	13	3412	11	4082	10
HENAN	3525	7	3842	10	3874	11
SHAANXI	2900	12	3251	13	3853	12
GUANGXI	3166	11	3336	12	3710	13
YUNNAN	2194	18	2812	15	3525	14
LIAONING	2799	15	3144	14	3473	15
CHONGQING	2033	20	2562	18	3301	16
ANHUI	2331	17	2738	16	3011	17
HEILONGJIANG	2843	14	2631	17	2781	18
HUBEI	1873	23	2078	21	2633	19
GUIZHOU	1929	21	2235	20	2568	20
HEBEI	2705	16	2256	19	2352	21
HUNAN	1903	22	2062	22	2347	22
JIANGXI	2049	19	2015	23	2160	23
GANSU	1272	24	1497	24	1682	24
XINJIANG	1183	25	1226	25	1455	25
INNER MONGOLIA	753	26	874	26	1077	26
JILIN	727	27	823	27	822	27
HAINAN	692	28	748	28	738	28
QINGHAI	499	29	543	29	592	29
NINGXIA	407	31	452	30	476	30
TIBET	451	30	366	31	456	31

Source: Finance Yearbook of China 2016

Table A1 contains the provincial distribution of local SOEs, and the rankings for the number of SOEs in 2009, 2012, and 2015. While in most provinces the number of SOEs has increased, the rankings of these

SOEs are relatively stable. Table A1 also shows that central SOEs concentrate in developed provinces like Beijing, Shanghai, and Guangdong.

Figure A1: Total Numbers and Revenues of Local SOEs in 2015 by Province

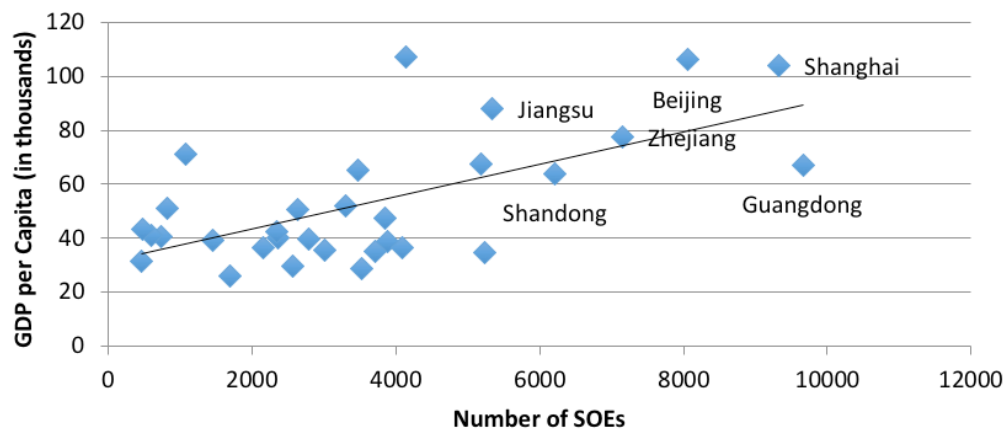


Source: Finance Yearbook of China 2016

Figure A1 plots the relationship between Total Numbers and Revenues of Local SOEs in 2015. It shows that two out of the three most developed regions have above-average revenue compared to the number of SOEs operating in that region, and in the case of Beijing, the

ratio of revenue-to-number-of-SOEs is only slightly less than the mean. Since the revenues of these firms are relevant to GDP calculation, provinces (or municipalities) with higher revenue-to-number ratios-of-SOEs are likely to have higher total GDP-to-number ratios as well.

Figure A2: GDP per Capita and Number of SOEs in 2015 by Province

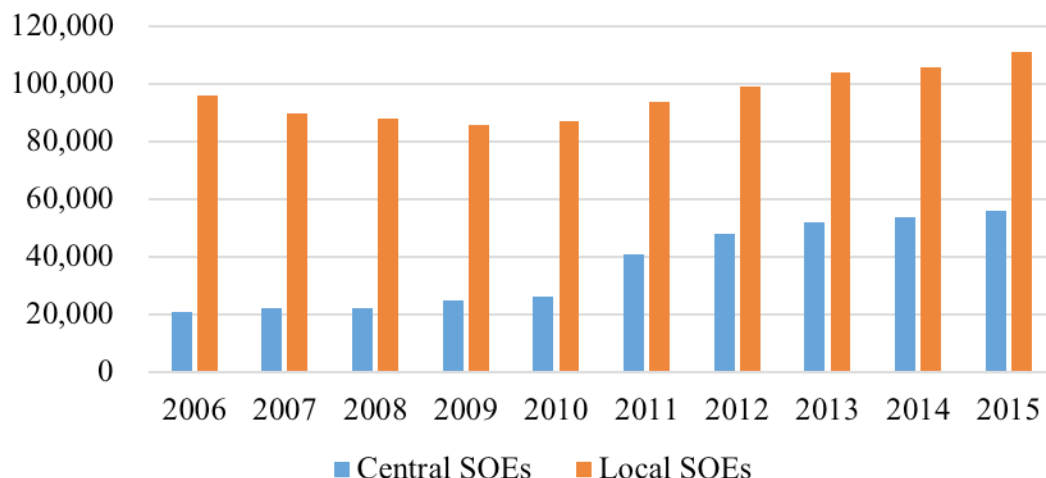


Source: Finance Yearbook of China 2016, China Statistical Yearbook 2016

Figure A2 plots the relationship between province-level and province-level municipality GDP-per-capita values and the number of local SOEs in the same province in 2015. As shown in the figure, regions with a greater number of SOEs tend to be more developed and have

higher GDP-per-capita rates. This figure illustrates further the continuing importance of SOEs in China, particularly for regional economy development. In another sense, this graph suggests that certain economies are increasingly dependent on local SOEs.

Figure A3: Number of Central SOEs and Local SOEs

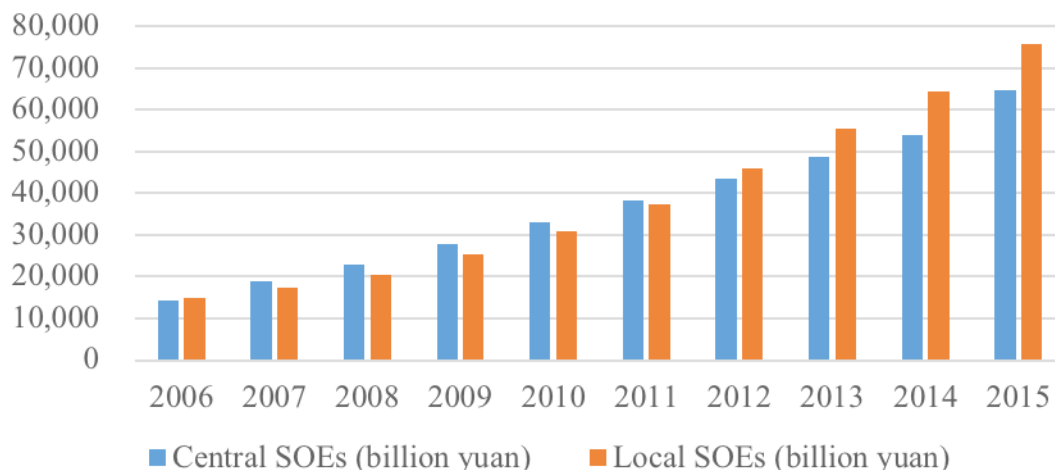


Source: Finance Yearbook of China 2016

Figure A3 plots the number of central SOEs and local SOEs between 2006 and 2015. The figure shows that the number of central SOEs declined during the 2008 global recession, but has since increased, whereas the number of local SOEs remained almost the same between 2006

and 2010, and has increased in recent years. It is worth noting that the figures reported here are higher than those reported in the China Statistical Yearbook, which only reports firms above a designated size.

Figure A4: Total Assets of Central SOEs and Local SOEs

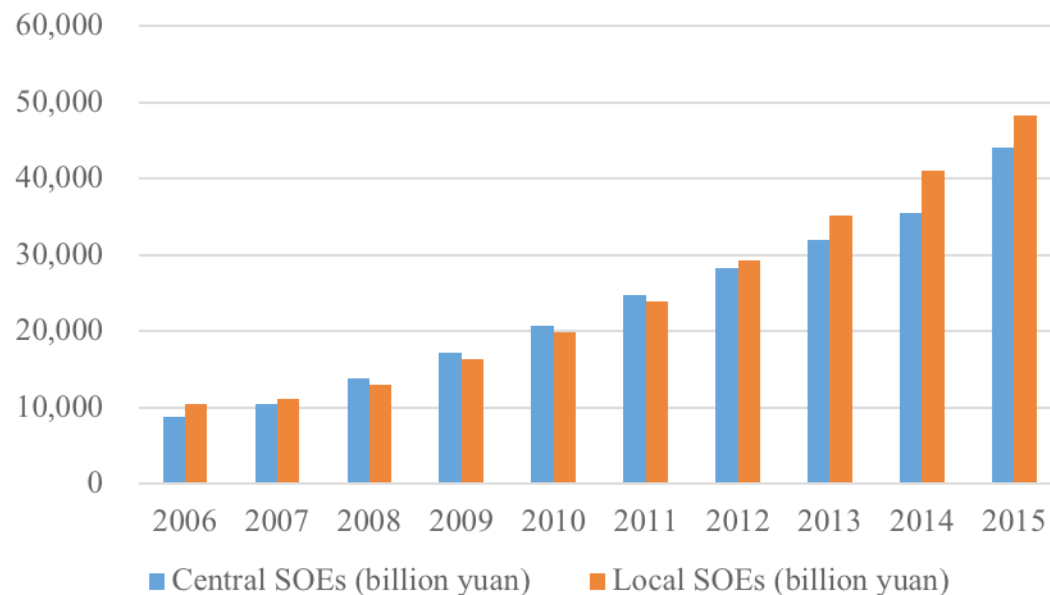


Source: Finance Yearbook of China 2016

Figure A4 compares the total assets of local SOEs and central SOEs between 2006 and 2015. The graph shows that before 2009, central SOEs had greater total assets than their local counterparts. However, after 2010, the

trend reversed, and local SOEs lead the growth of total assets, which implies that local SOEs have grown in importance to Chinese economy.

Figure A5: Total Liability of Central SOEs and Local SOEs



Source: Finance Yearbook of China 2016

Figure A5 plots the total liabilities (aggregate debt and financial obligations, including loans, accounts payable, mortgages, deferred revenues, and accrued expenses) of central SOEs and local SOEs. The total liability level for both local SOEs and central SOEs rose, with a larger

increase in local SOEs in recent years. Figures A3, A4, A5 imply that central SOEs are generally much larger and have a greater influence on China's economy, but local SOEs have had an increasing impact on the overall Chinese economy.

APPENDIX B: LIST OF CENTRAL SOEs UNDER SASAC BY INDUSTRY²⁴

Non-ferrous Metals

Aluminum Corporation of China (CHINALCO)
中国铝业公司

China Minmetals Corporation
中国五矿集团公司

China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC)
中国有色矿业集团有限公司

General Research Institute for Nonferrous Metals (GRINM)
北京有色金属研究总院

Beijing General Research Institute of Mining & Metallurgy
北京矿冶研究总院

China Metallurgical Geology Bureau (CMGB)
中国冶金地质总局

Information Technology Services

China Electronics Technology Group Corporation (CETC)
中国电子科技集团公司

China Telecommunications Corporation (China Telecom)
中国电信集团公司

China United Network Communications Group Co., Ltd.
中国联合网络通信集团有限公司

China Mobile Communication Group Co. (China Mobile)
中国移动通信集团公司

China Electronics Corporation (CEC)
中国电子信息产业集团有限公司

Potevio Company Ltd. (Potevio)
中国普天信息产业集团公司

Datang Telecom Technology & Industry Group
电信科学技术研究院

Alcatel-Lucent Corporation Limited
上海贝尔股份有限公司

FiberHome Technologies Group
武汉邮电科学研究院

Petroleum & Petrochemicals

China National Petroleum Corporation (CNPC)
中国石油天然气集团公司

China Petrochemical Corporation (Sinopec Group)
中国石油化工集团公司

China National Offshore Oil Corp (CNOOC)
中国海洋石油总公司

Sinochem Group Corporation (Sinochem)
中国中化集团公司

China National Chemical Corporation (ChemChina)
中国化工集团公司

China National Chemical Engineering Group Corporation
中国化学工程集团公司

Automotive

China FAW Group Corporation (FAW)
中国第一汽车集团公司

Dongfeng Motor Corporation (DFM)
东风汽车公司

²⁴ Identification mainly follows “The State-owned Enterprise Reform Record (2013-2016) (Overview)” by the R&D Department at China Securities. Since some enterprises are operating in diversified industries, classifications may not be consistent with different standards. While our identification is based on the report by China Securities, we make some adjustments according to information from individual enterprises’ website. For instance, China Securities classifies COFCO as in real estate industry, but the public, and COFCO itself treat this enterprise as in agriculture industry. Similar adjustments also apply to CFHI, and CRCCG.

Agriculture

China Grain Reserves Corporation (Sinograin)
中国储备粮管理总公司
China National Agricultural Development Group Corporation
中国农业发展集团有限公司
China Forestry Group Corporation
中国林业集团公司
China National Cereals, Oils & Foodstuffs Corp. (COFCO)
中粮集团有限公司

Tourism

China Travel Service (HK) Group Corporation (HKCTS)
中国旅游集团公司[香港中旅（集团）有限公司]

Machinery

China National Machinery Industry Corporation (Sinomach)
中国机械工业集团有限公司
Harbin Electric Corporation (HE)
哈尔滨电气集团公司
Dongfang Electric Corporation (DEC)
中国东方电气集团有限公司
China Academy of Machinery Science & Technology
机械科学研究总院
Sinosteel Corporation (Sinosteel)
中国中钢集团公司
CRRC Corporation Limited
中国中车集团公司
China Railway Signal & Communication Corporation (CRSC)
中国铁路通信信号集团公司
China Railway Engineering Corporation Group (CRECG)
中国铁路工程总公司
China First Heavy Industries Group (CFHI)
中国第一重型机械集团公司

Shipping

China COSCO Shipping Corporation Limited
中国远洋海运集团有限公司
China National Aviation Holding Company (CNAH)
中国航空集团公司
China Eastern Air Holding Company (CEAH)
中国东方航空集团公司

China Southern Air Holding Company (CSAH)
中国南方航空集团公司
China TravelSky Holding Company (TravelSky)
中国民航信息集团公司
China National Aviation Fuel Group Corporation (CNAF)
中国航空油料集团公司
China Aviation Supplies Holding Company (CAS)
中国航空器材集团公司

Iron and Steel

Anshan Iron and Steel Group Corporation (Ansteel)
鞍钢集团公司
Baosteel Group Corporation (Baosteel)
中国宝武钢铁集团有限公司
China Iron and Steel Research Institute Group (CISRI)
中国钢研科技集团有限公司

Textiles

Sinolight Corporation (Sinolight)
中国轻工集团公司
China National Arts & Crafts (Group) Corporation (CNACGC)
中国工艺（集团）公司
China Hi-Tech Group Corporation Ltd.
中国恒天集团有限公司
China Silk Corporation
中国中丝集团公司

Electric Power and Coal

State Grid Corporation of China (SGCC)
国家电网公司
China Southern Power Grid Corporation (CSG)
中国南方电网有限责任公司
China Huaneng Group (CNHG)
中国华能集团公司
China Datang Corporation (CDT)
中国大唐集团公司
China Huadian Corporation (CHD)
中国华电集团公司
China Guodian Group
中国国电集团公司
China Power Investment Corporation (CPI)
国家电力投资集团公司

China Three Gorges Corporation (CTG)
中国长江三峡集团公司
Shenhua Group Corporation Limited
神华集团有限责任公司
China National Coal Group Corp. (ChinaCoal)
中国中煤能源集团有限公司
China Coal Technology & Engineering Group Corp.
(CCTEG)
中国煤炭科工集团有限公司
China National Administration of Coal Geology (CNACG)
中国煤炭地质总局
Power Construction Corporation of China
中国电力建设集团有限公司
China Energy Engineering Group Co., Ltd.
中国能源建设集团有限公司
China Guangdong Nuclear Power Holding Co., Ltd.
(CGNPC)
中国广核集团有限公司
China XD Group
中国西电集团公司

Real Estate and Building Materials

China State Construction Engineering Corporation (CSCEC)
中国建筑工程总公司
China Merchants Group
招商局集团有限公司
China Resources (Holdings) Company, Ltd.
华润（集团）有限公司
China National Building Materials Group Corporation
中国建材集团有限公司
China Academy of Building Research (CABR)
中国建筑科学研究院
China Poly Group Corporation
中国保利集团公司
China Railway Construction Corporation Group (CRCCG)
中国铁道建筑总公司
China Architecture Design & Research Group (CAG)
中国建筑设计研究院
OCT Group
华侨城集团公司

Aerospace and Military

China National Nuclear Corporation (CNNC)
中国核工业集团公司

China Nuclear E&C Group
中国核工业建设集团公司
China Aerospace Science and Technology Corporation
(CASC)
中国航天科技集团公司
China Aerospace Science & Industry Corporation (CASIC)
中国航天科工集团公司
Aviation Industry Corporation of China (AVIC)
中国航空工业集团公司
China State Shipbuilding Corporation (CSSC)
中国船舶工业集团公司
China Shipbuilding Industry Corporation (CSIC)
中国船舶重工集团公司
China North Industries Group Corporation
(NORINCOGROUP)
中国兵器工业集团公司
China South Industries Group Corporation (CSGC)
中国兵器装备集团公司
Aero Engine (Group) Corporation of China
中国航空发动机集团有限公司

Other Industries

China General Technology (Group) Holding Co., Ltd.
中国通用技术（集团）控股有限责任公司
State Development & Investment Corporation (SDIC)
国家开发投资公司
Commercial Aircraft Corporation of China Ltd.
(COMAC)
中国商用飞机有限责任公司
China Energy Conservation and Environmental
Protection Group (CECEP)
中国节能环保集团公司
China International Engineering Consulting
Corporation (CIECC)
中国国际工程咨询公司
China Chengtong Holdings Group Ltd.
中国诚通控股集团有限公司
China National Salt Industry Corporation (CNSIC)
中国盐业总公司
China International Intellectech Corporation (CIIC)
中国国际技术智力合作公司
China Communications Construction Company, Ltd.
(CCCC)
中国交通建设集团有限公司

China National Pharmaceutical Group Corporation
中国医药集团总公司

Xinxing Cathay International Group Co., Ltd.
新兴际华集团有限公司

China National Gold Group Corporation
中国黄金集团公司

China Hualu Group Co., Ltd.
中国华录集团有限公司

Nam Kwong (Group) Company Limited (under
consideration of reconstruction)

南光（集团）有限公司已与珠海振戎公司实施重
组，正在办理工商登记手续

China Railway Materials Commercial Corporation
(CRMCC)

中国铁路物资（集团）总公司

China Reform Holdings Corporation Limited
中国国新控股有限责任公司

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