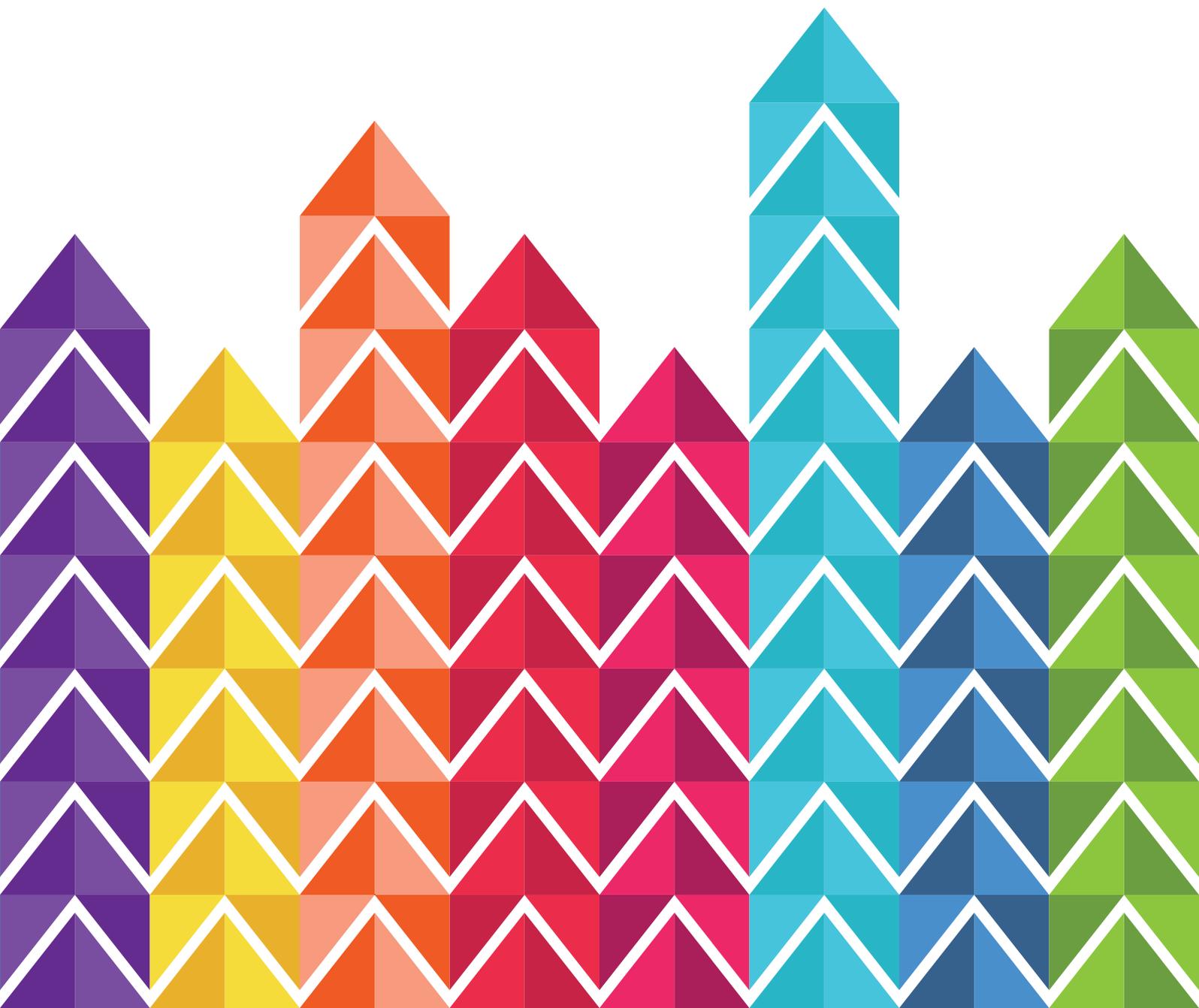


THE PERFORMANCE OF STATE OWNED ENTERPRISES IN CHINA:

An Empirical Analysis of Ownership Control through SASACs

SEA-JIN CHANG | SANDY YUAN JIN



Acknowledgements

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Disclaimer

All views and opinions expressed in this report do not necessarily reflect those of CGIO, NUS, and CIMA, but remain the sole responsibility of the authors.



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| Foreword by CGIO

This study 'The Performance of State Owned Enterprises in China: An Empirical Analysis of Ownership Control through SASACs' completes the trilogy research reports sponsored by Chartered Institute of Management Accountants (CIMA) on State Owned Enterprises (SOEs) in Asia and their role in shaping the economies they are in.

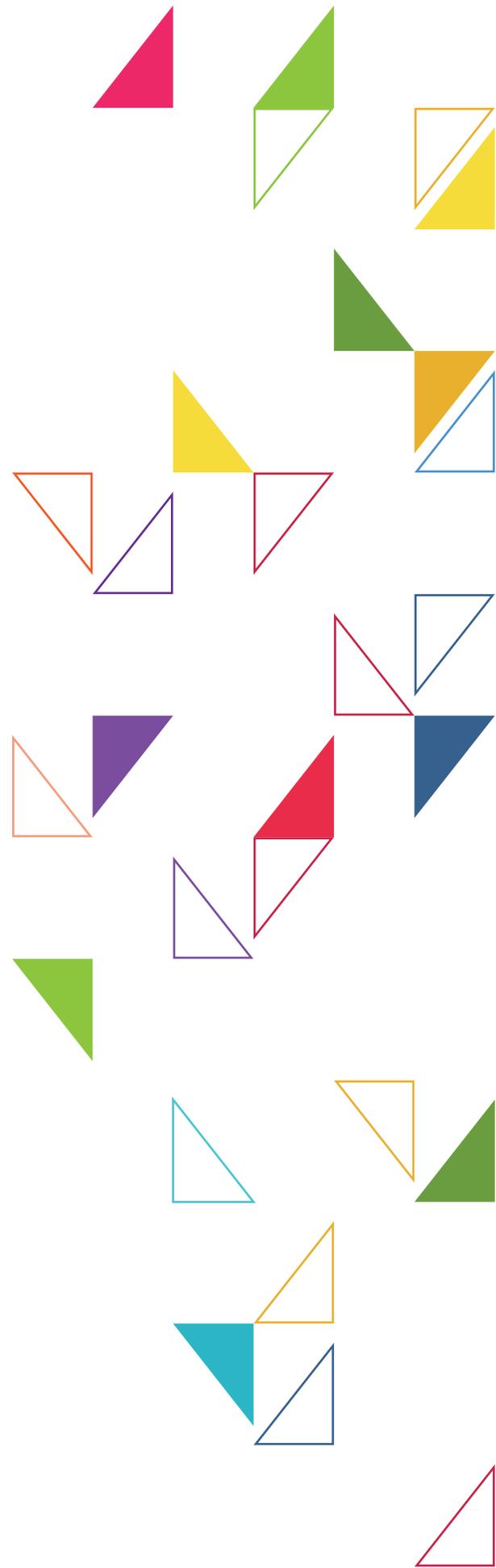
This research report on SOEs in China is timely as it coincides with China's current reforms in SOE management. China's SOEs have been credited for China's phenomenal economic growth for the past three decades but is facing unprecedented challenges posed by global economic slowdown. This report offers perspectives in the comparison of China SOEs with the Singaporean model of Temasek-Linked companies so as to distill best practices for enterprises in the two countries and beyond.

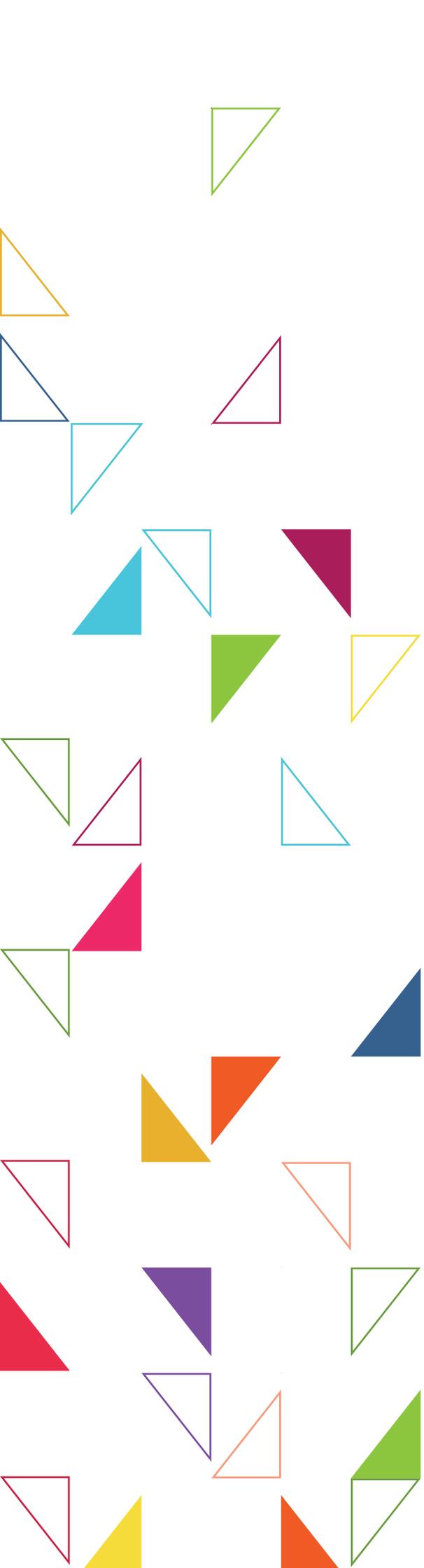
This study has been made possible with the generous sponsorship and support of our valued partner, CIMA, with whom we collaborated for the entire series. CGIO's research focus on corporate governance and sustainability synergizes with CIMA's commitment to these core business values.

I am also deeply appreciative of the principal investigator, Professor Sea-Jin Chang, assisted by Ms Sandy Yuan Jin, for their tireless efforts in this project.

I wish you a happy reading.

Dr Lawrence Loh
Director
Centre for Governance, Institutions and Organisations
NUS Business School





| Foreword by CIMA

The Chartered Institute of Management Accountants (CIMA) is pleased to support the research conducted by the Centre for Governance, Institutions and Organisations (CGIO), NUS Business School of the National University of Singapore.

We commend the research that has been completed on State Owned Enterprises (SOEs) in Singapore and Vietnam, with the latest being on SOEs in China. SOEs play an important role in shaping the economies they are in, as can be seen from the Singapore model that has been very successful in transforming Singapore into a developed country. There is certainly much that we can learn from Singapore for SOEs in Vietnam and China.

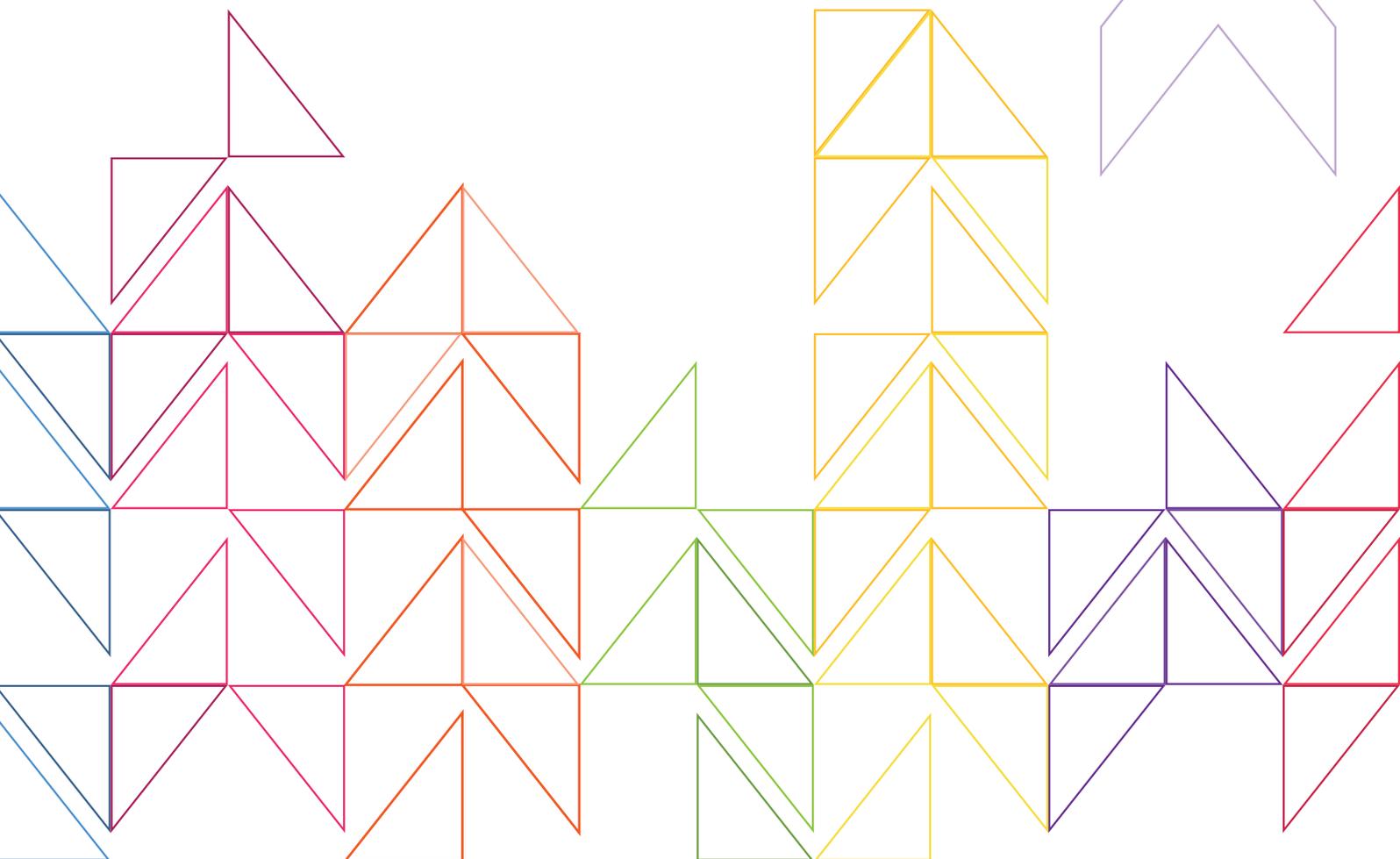
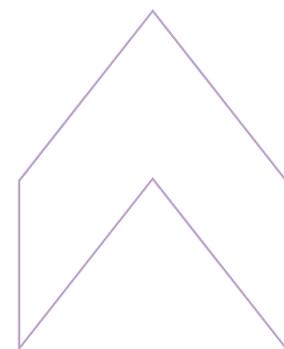
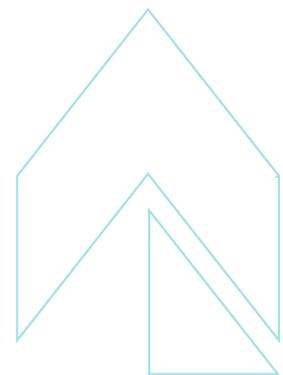
From the three reports that have been completed by CGIO, there is no doubt that transparency and good corporate governance play a very vital role in the success of SOEs. CIMA has been an active contributor to the global corporate governance debate for many years. In fact, the need for good governance is an integral part of the CIMA professional qualification syllabus. Building better businesses trusted by society drives our ambition for the future.

Once again, we thank CGIO for giving us the opportunity to be a part of their research on SOEs, the benefits of which will be realized for the respective countries and for other countries seeking to reform their SOEs.

Venkkat Ramanan FCMA, CGMA
Regional Director, Asia Pacific
Chartered Institute of Management Accountants

| Abstract

China has come a long way in transitioning from Communist to market-based economy. As part of a series of reforms to catalyze this transition, the government transformed SOEs into joint stock companies owned in part by the state. In particular, the State Assets Supervision and Administrative Commission (SASAC) was created – modeled after Temasek Holdings in Singapore – to manage and control state ownership shares. This study examines the financial performance of publicly listed firms in China over which the state has direct or indirect ownership control through SASACs. We find that both direct and indirect ownership by the government have a negative impact on firm performance, although indirect ownership via SASACs has a less detrimental effect. This study suggests that further SOE reform is needed to improve SASACs' monitoring of their portfolio companies.



1 | Introduction

Until 2015, China exhibited steady growth despite the global financial crisis of 2008 that plunged developed countries like the US and European nations into deep recessions. Recently, though, China has begun to show signs of its own slow downturn. In 2015, China failed to meet its 7% growth target. Then, right after opening in January of 2016, Chinese stock markets plunged. Debt-laden state owned enterprises (SOEs) received most of the blame. Investors worry that SOE performance will further deteriorate, eventually pushing both Chinese and global economies into deeper recessions.

The poor performance of Chinese SOEs raises the question of whether the series of reforms seeking to improve the efficiency of the state sector has been effective. At the center of SOE reform is the State Assets Supervision and Administrative Commission (SASAC). The SASAC was modeled after the Singapore's Temasek Holdings, known for its reliable and efficient state-owned enterprise model. Temasek owns several large enterprises, many listed in the stock exchange, including DBS Bank, SingTel, Singapore Airlines, and Keppel Corporation. Temasek exercises its ownership control by appointing CEOs and monitoring their performance. The successful transformation of the city state from a developing third world country to economic hub has been attributed to the Temasek model.

Since its "Reform and Open Door Policy" of 1979, the Chinese government sought to emulate the Temasek Model as a way to reform its staggering state sector. Run by the central government, the central SASAC owns 106 major Chinese corporations, including SinoChem, FAW, Baosteel, and China Telecom. Furthermore, provincial and city governments created their own local SASACs that own and control the state assets owned by these local governments. Unlike the stellar performance of Temasek firms, however, the performance of SASAC-controlled companies remains questionable at best.

This report examines the financial performance of publicly listed companies in China partly owned by the SASAC and other state agencies. Specifically, we analyze the ownership structures of publicly listed companies and the extent to which the SASAC controls and monitors their performance. We then explore why the SASAC may not function as well as its Singaporean counterpart. In so doing, we generate insights into how corporate governance reform in China could maximize future performance. This report will have implications for other emerging market countries by addressing such questions as, "What factors should be considered in replicating the Singaporean model in emerging markets?" and "To what extent does state ownership improve the efficiency of state owned enterprises in emerging economies?" There are a lot of lessons to be learned from Temasek by SASACs in the future.

2| SOE Reform in China

As a vital part of the “Reform and Opening” policy, SOEs in China have experienced ownership reforms since the 1970s in order to become more efficient and competitive. In the beginning of these reforms, the Chinese government tried to increase SOE efficiency by providing autonomy and incentives with the government as sole proprietor of the main management control under the Communist regime. However, the government soon realized this approach to be futile; the earnest restructuring of local firms would require more fundamental reforms to ownership structures.

While technically not allowed under the Communist regime, some firms bypassed the official ban on private ownership of firms and, in an interesting turn, ended up inspiring the government’s next step. In southern regions, especially Guangdong, private firms were disguised as collectives. When then leader of China Deng Xiaoping visited in 1992, he realized that the region’s superior economic performance could be largely attributed to the existence of these illegal private firms. As such, he called for the privatization of state owned concerns in other parts of China. The government shifted its reform policy to enable the privatization of SOEs, a process known as *gaizhi* (Garnaut et al., 2005).

The Corporate Law of 1993 provided a legal framework for converting SOEs to modern corporations. Thousands of SOEs soon transformed into limited liability firms or joint stock companies, with state ownership converted to shares. Initially, the government restricted incorporation to just the exchange of shares among SOEs. Soon, though, a private firm could legally take ownership. The opening of the Shenzhen and Shanghai stock exchanges in 1990 and 1991, respectively, further enabled firms to issue shares to private investors. Once SOEs incorporated, the state shares could be sold to private interests, creating de facto privatization. Alternatively, the government could maintain ownership for possible future sales.

At the same time, the Chinese government facilitated the bankruptcy of insolvent SOEs. In the early 1990s, many SOEs posted losses and accumulated large debts. In 1995, the Chinese government adopted a policy epitomized by the slogan, “Keep only large firms and let small ones go.” “Keep only large firms” meant the government would continue owning and controlling strategically important firms like those in resources, utilities, and energy. These surviving SOEs grew larger and more profitable, fulfilling the aims of policy reform. The number

of SOEs dropped from 47,958 in 1998 to 5,118 in 2009. Those maintaining legal status as SOEs in 2009 represented 8.2% of assets and accounted for roughly 1.3% of all firms in China (Chang, 2013: 74). Thus, although smaller in number, the remaining SOEs now possessed large assets.

On the flip side, “let small ones go” meant that smaller SOEs faced closure or immediate sale. Because most were unprofitable, local governments, the owners of the smaller SOEs, had strong incentive to restructure them. According to Garnaut et al. (2005: 47), the years after the initiation of policy-oriented bankruptcy witnessed 3,377 cases of bankruptcies, RMB 223.8 billion in write-offs, and 6.2 million layoffs. To promote this reform, the government set up specialized, state-owned restructuring agencies and asset management corporations, including the big four state owned asset management corporations: China Great Wall Asset Management Corporation, China Cinda Asset Management Corporation, China Huarong Asset Management Corporation, and China Orient Asset Management Corporation. The restructuring took such forms as debt equity swaps, ownership diversification, and employee shareholding, including management buyout.¹

After a series of reforms, most SOEs were restructured into joint stock companies with the government owning large shares. Therefore, in principle, these companies can operate like private firms with private shareholders who can trade in stock exchanges. However, their direct and indirect ownership through the government remained intact. Initially, these state assets were managed and supervised by different government departments. In order to integrate government ownership and control, the SASAC (State Assets Supervision and Administration Commission of the State Council) was established in 2003, modeled after Temasek Holdings in Singapore. Upon establishment, the SASAC controlled 196 firms in strategically important industries in China. The number of firms under central SASAC control declined over time to 106 major Chinese corporations as of 2015. Similarly, provincial and city governments created their own local SASACs to control state assets owned by these local governments. For example, Unis, a semiconductor manufacturer, is directly owned and controlled by Tsinghua University, with its ultimate ownership belonging to the Ministry of Education. Thus, despite the modern ownership structure, these incorporated firms are de facto SOEs. In Section 4, we further discuss the organization and functioning of SASACs.

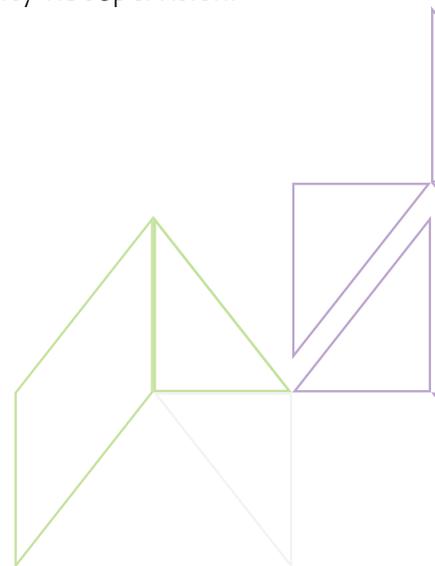
¹ There were several cases of “asset stripping” during the privatization process, i.e., lowering the valuation and selling assets at a low price to an interested party (Garnaut et al. 2005: 176-177). Haier’s management buyout (MBO) plan in 2003 sparked a backlash. The government subsequently explicitly forbade the MBO of large state owned enterprises.

The government designed the split-share structure in order to maintain control over SOEs even after privatization and listing in the stock market. Under this structure, shares were split into tradable shares publicly traded in stock markets and non-tradable shares owned by the government and transferable only with approval from the China Securities Regulatory Commission. Unlike tradable shares that have market prices, non-tradable shares are assigned a nominal value of 1 RMB per share. Since owners of non-tradable shares cannot trade them, they lack incentive to monitor management or improve firm performance. This split-share structure was finally abolished in 2005. During the process of converting non-tradable shares into tradable ones, tradable shareholders had to be compensated for the loss of their liquidity premiums. Thanks to the conversion of non-tradable shares, private investors could access SOEs more easily, facilitating the further privatization of SOEs.

Prior to SOE reform, the government was the sole owner of these firms. As such, the definition of an SOE was very straightforward. However, as reform progressed, most SOEs transformed into limited liability firms or joint stock companies, with state ownership converted to tradable shares. This enabled private investors to become shareholders of SOEs. If we define an SOE as a firm whose equity capital is invested by the State², there are three types: (1) Wholly State Owned Enterprise with the State as sole owner; (2)

State Controlling Enterprise with many possible shareholders, including private individuals but wherein the State has ultimate control; and (3) those in which the State owns shares but not enough to control the firm. In this report, we focus on the first two types.

Figures 1 and 2 show the number and market capitalization of SOEs among publicly listed firms in China, as well as their proportion relative to all publicly listed firms. The number of publicly listed SOEs remained about the same over the timeframe of this study, 963 in 2003 and 970 in 2013. However, the proportion of SOEs in the pool of all publicly listed firms decreased sharply, from 74.9% in 2003 to 38.4% in 2013, as the number of publicly listed firms increased from 1,268 to 2,529. Furthermore, SOEs' share of market capitalization decreased from 83.9% in 2003 to 55.8% in 2013. Overall, despite thirty years passing since the reform and open door policy, SOEs still play a vital role in the Chinese economy, underscoring the importance of maximizing SOE efficiency via supervision.



² Please refer to the website of the National Bureau of Statistics of the People's Republic of China: http://www.stats.gov.cn/statsinfo/auto2072/201311/t20131101_451646.html



Figure 1: Number of SOEs 2003 - 2013

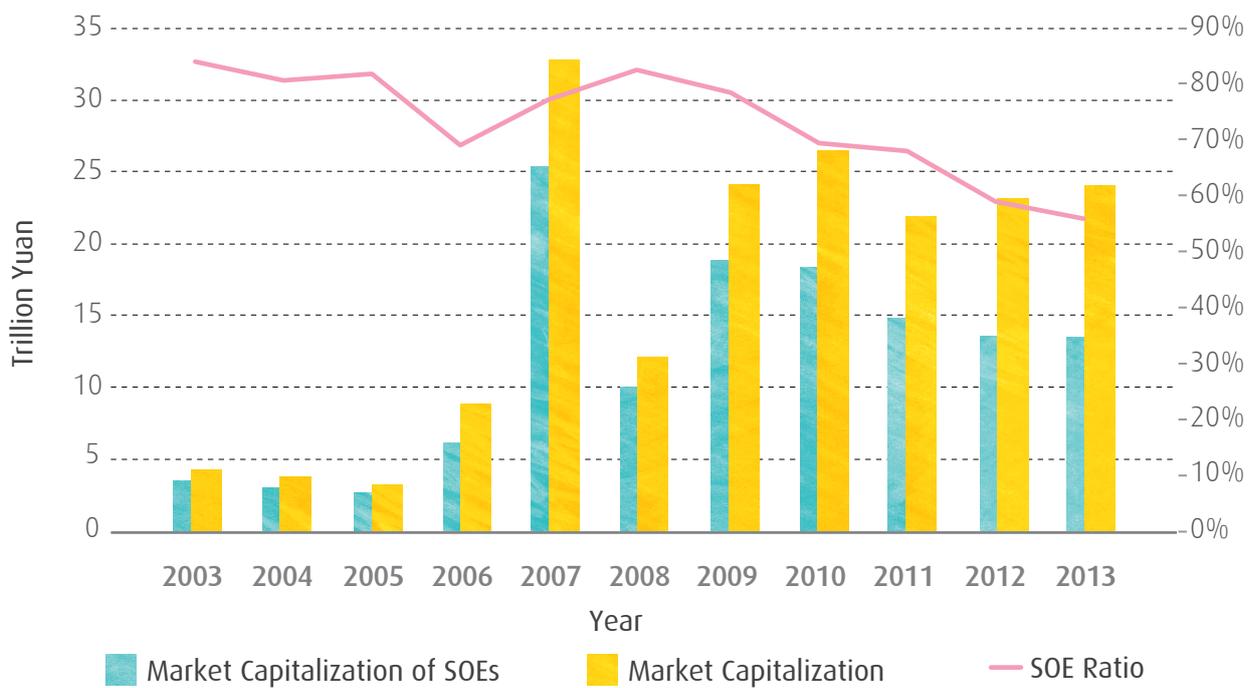
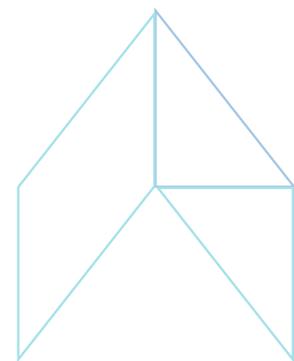


Figure 2: SOEs' Market Capitalization 2003 - 2013

3| The Ownership Structure of Publicly Listed Companies in China



3.1 | Pyramid Ownership Structure

Despite the different types of SOEs, most listed companies in China have a pyramid ownership structure. In a typical pyramid ownership structure, the ultimate controller at the top controls listed companies through an average of 2.6 layers of ownership, including the immediate controllers who directly control the publicly listed firms.

The Chinese Company Law defines an immediate controller as a shareholder who owns more than 50% of shares. In the case of no shareholder with more than a 50% share, the Law defines an immediate shareholder as a shareholder with enough voting rights to significantly affect company decision making. But, the Law doesn't specify any clear threshold to indicate when voting rights have this

effect. Thus, we must rely on the annual reports of listed firms to identify their immediate and ultimate shareholders (Luo & Lu, 2011; Hong, Xu & Li, 2011). In most cases, the immediate controllers are the largest shareholders. In some cases, there are more than two immediate controllers, who are in turn controlled by the same ultimate controller. Figure 3 shows the Shenzhen Properties & Resources Development (Group) Ltd., a listed company in China, as an example. Shenzhen Investment Holdings Company Limited accounted for 63.8% of shares in 2013, thereby making it the immediate controller of the firm. The Shenzhen Investment Holdings Company Limited is then fully owned by the Shenzhen SASAC, a local SASAC that owns and controls the assets of the Shenzhen City Government.



Figure 3: The Ownership Structure of Shenzhen Properties & Development in 2013

In some special cases, two or three immediate controllers jointly control listed firms. As in Figure 4, Rongxin Power Electronic Co., Ltd. is owned and controlled by the Shenzhen-Hongkong Institution Venture Investment Co., Ltd., which owns 14.7%, and Qiang Zuo, a private individual, who owns 11.6%. Both are identified as the immediate controllers according to the company's annual report in 2013. In other cases, there are no immediate and ultimate controllers due to dispersed structures. For example, Goldwind, a multi-faceted wind power company, has neither immediate nor ultimate controllers according to its 2013 annual report,

with the largest shareholder owning 13.9% and the second largest 10.7%. In another case, the largest shareholder of China Vanke Co., Ltd., a leading real-estate company in China, owned 14.7% shares in 2013, with the second largest owning less than 1%. Since the largest shareholder is not involved in company operations, the company likewise reports no immediate or ultimate controller in its 2013 annual report. The number of firms with no obvious immediate or ultimate controllers varies by year. Between 2003 and 2013, a total of 37 firms are identified with no immediate or ultimate controllers and are thus excluded from our analyses.



Figure 4: The Ownership Structure of Rongxin Power Electronic in 2013

This typical pyramid structure of the ultimate and immediate controllers in China differs from that of Singapore, as Temasek Holdings directly owns and controls its portfolio companies. Since the SASAC owns and controls the immediate controller, which in turn controls the listed companies, the SASAC does not have direct influence on its listed companies. Since the immediate controllers are often SOEs themselves, they do not

possess strong incentive to monitor and control their publicly listed companies. We therefore need to explore whether the indirect ownership control of the SASAC through immediate controllers does indeed offer effective monitoring of publicly listed companies in China. In the next section, we explore which types of immediate and ultimate shareholders are associated with higher firm performance in China.

3.2 | Types of Immediate and Ultimate Controllers

As discussed earlier, ownership of publicly listed firms in China is highly concentrated. In order to identify major shareholders, we rely on the CSMAR (China Stock Market Accounting Research) Database, which provides a list of the top 10 shareholders for all listed firms. Considering that firms in the financial sector are different from other industries in terms of ownership structure and operation, we exclude them from this analysis. During our study time period (2003-2013), the combined shares of the top 10 shareholders total a roughly 60% stake in a given company.

Figure 5 shows that this high level of top 10 shareholders' combined ownership stake remained stable during this period, dropping slightly between 2006 and 2009 to about 55%, likely due to the split-shares reform discussed above. This reform turned non-tradable shares held by the government into tradable shares, thereby diluting the portion held by the top 10 shareholders. However, only a few years after the reform, the combined shares of top 10 shareholders bounced back to about 60%.

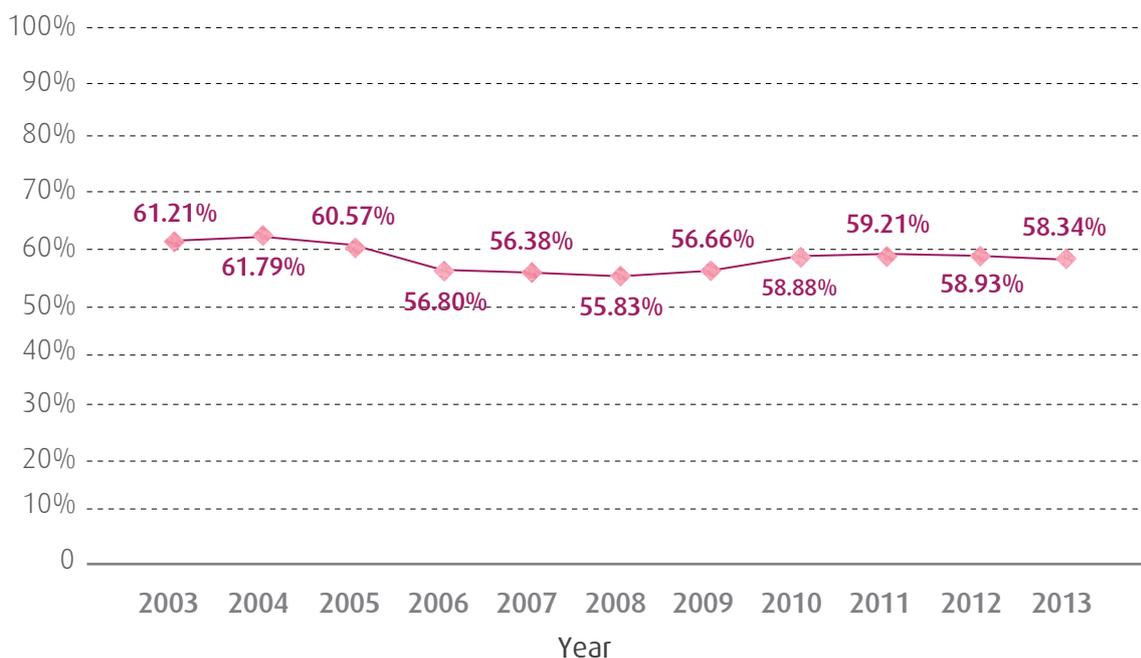


Figure 5: Top 10 Shareholders' Combined Ownership Stake

Figure 6 shows the composition of the top 10 shareholders for all publicly listed firms in China from 2003 to 2013. Figure 6 categorizes the top 10 shareholders into 8 types: central SASACs, local SASACs, governments, SOEs, financial institutions, banks, individuals, and companies. Here, SOEs are defined as enterprises wherein the ultimate controllers are either government ministries or local or central SASACs. Banks refer to commercial banks, while the financial institutions include funds, investment banks, investment companies, and trustees. Companies are non-financial corporations, most privately owned. There were no cases in which

central SASACs appear to be included in the list of top 10 shareholders. Similarly, local SASACs appear as top 10 shareholders in only 40 to 60 cases a year, representing less than 0.50% of cases overall. Figure 6 shows that the percentage of SOEs as top 10 shareholders dropped from about 20% in 2003 to about 7% in 2013. This is consistent with the overall privatization trend in China. On the other hand, Figure 6 shows that increasingly more financial institutions and individuals emerge as top 10 shareholders over time, while companies in the top 10 dropped from 35% in 2003 to 22% in 2013.

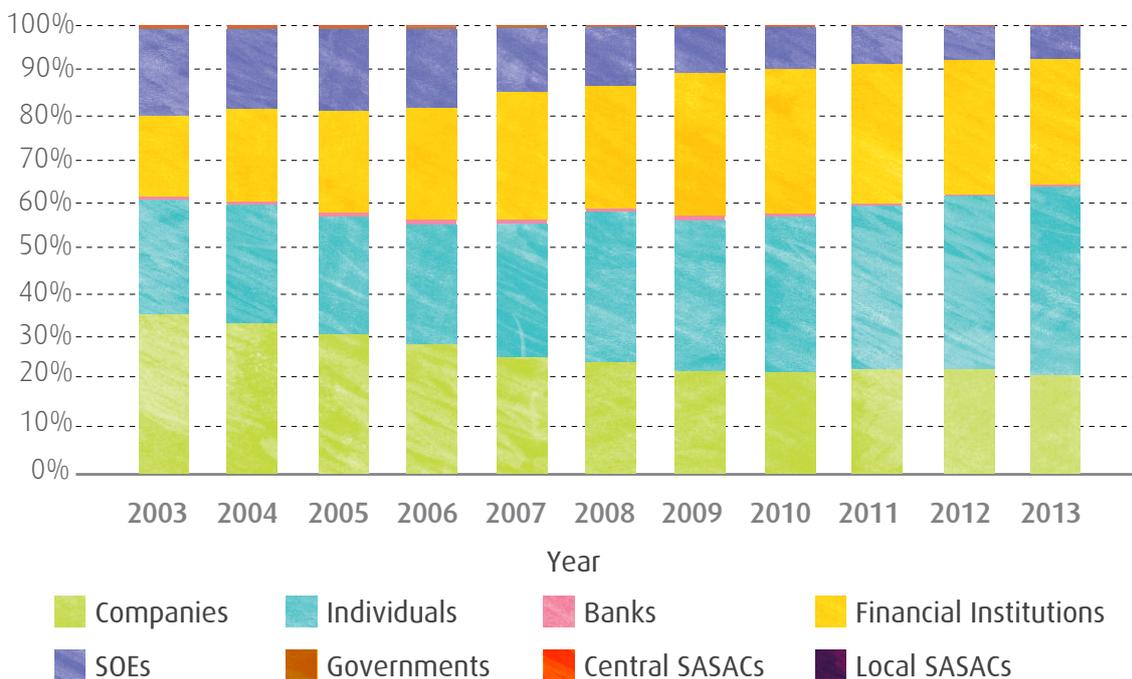
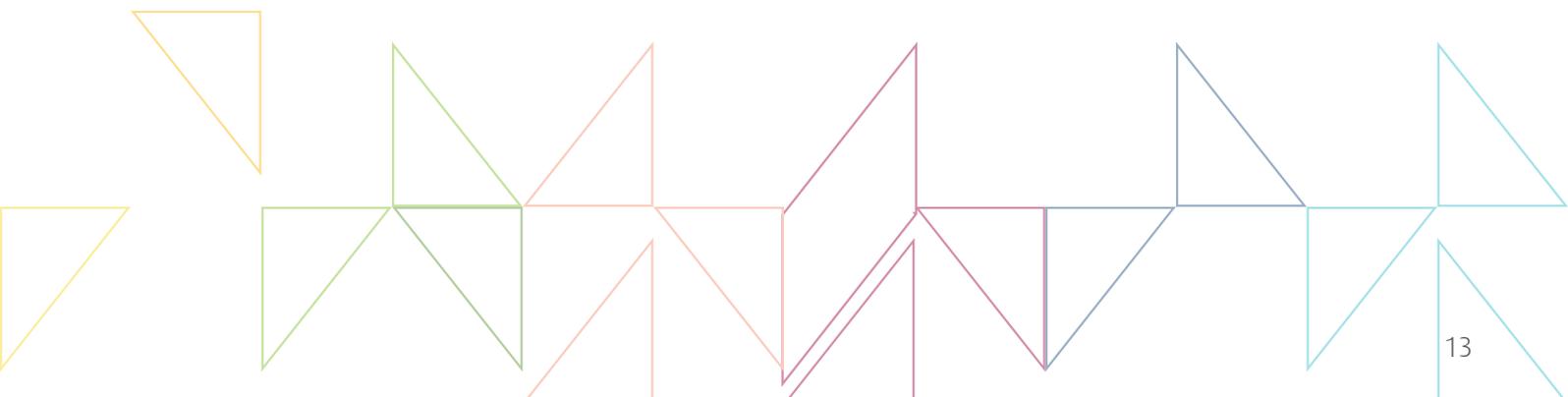


Figure 6: Composition of Top 10 Shareholders



As discussed earlier, immediate controllers are shareholders who can influence decision making, as defined by the Chinese Company Law and identified in companies' annual reports. It is not surprising, then, that these immediate controllers are often the largest shareholders. According to Figure

7, immediate controllers owned about 40% of shares in both 2003 and 2013. As immediate controllers are usually the largest shareholders, the largest shareholders of publicly listed companies in China own around 40% of shares, reconfirming that ownership is indeed highly concentrated.

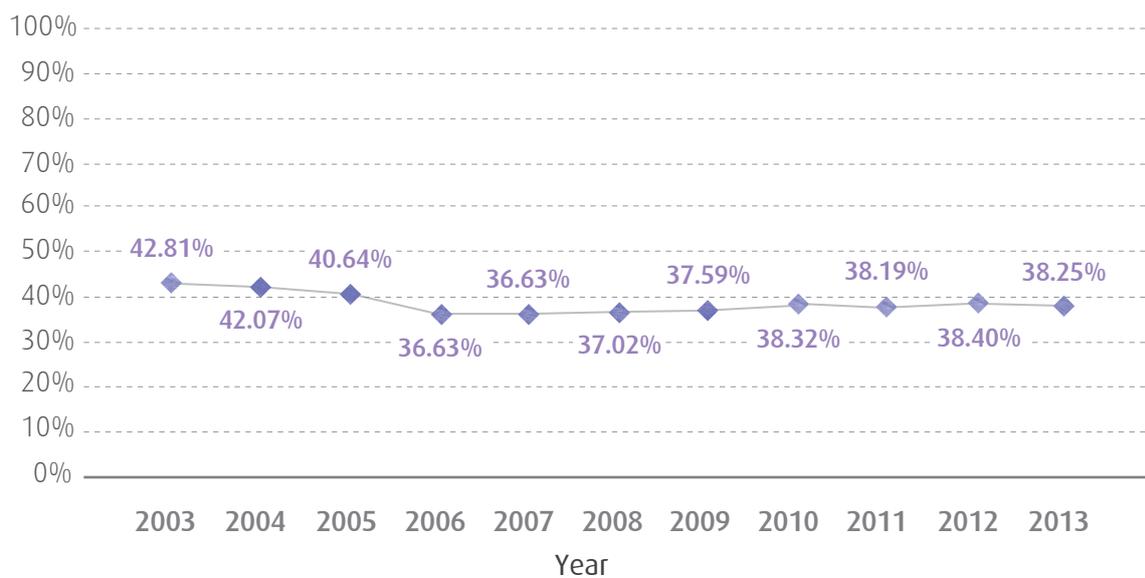


Figure 7: Average ownership stake of immediate controllers

Figure 8 shows the composition of immediate controllers. We again classify immediate shareholders into the same 8 types: central SASACs, local SASACs, SOEs, governments, financial institutions, banks, individuals, and companies. There is no firm in which banks have immediate control. SOE and government control dropped from 70% in 2003 to 40% in 2013. On the other hand, individual

control increased from close to zero in 2003 to more than 24% in 2013, thanks to SOE reform. Figure 8 shows that no firm is under the supervision of the Central SASAC, while just 1% in 2013 are controlled by local SASACs. This means that both central and local SASACs do not control listed firms directly, opting instead for indirect control through their SOEs.

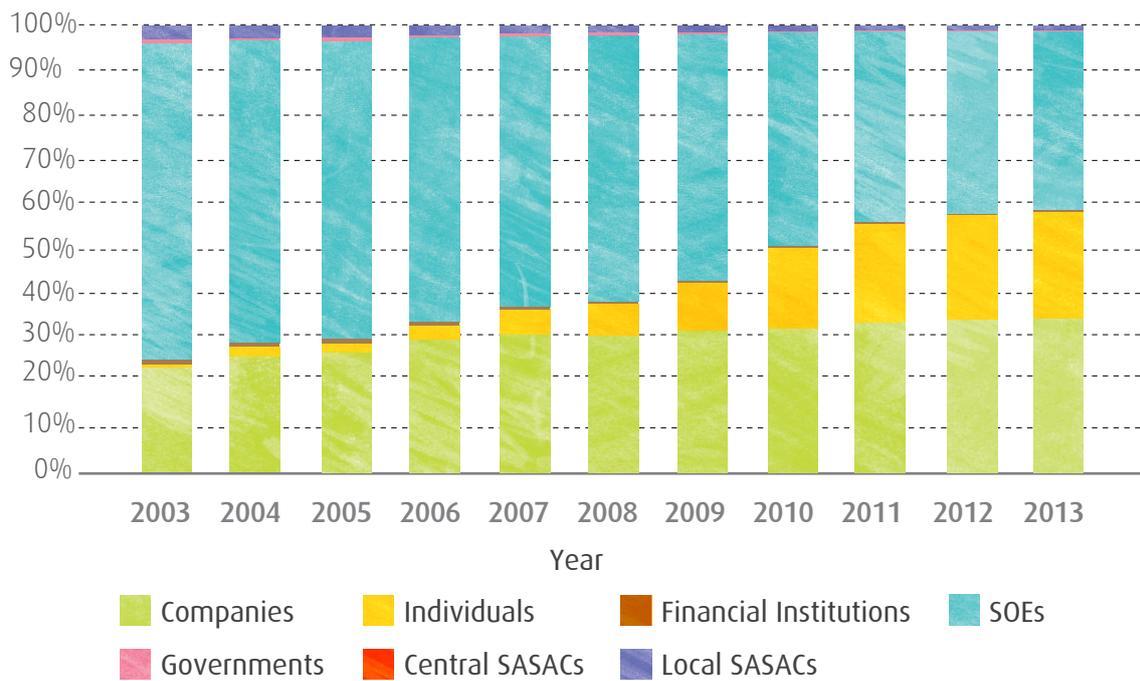


Figure 8: Composition of immediate controllers

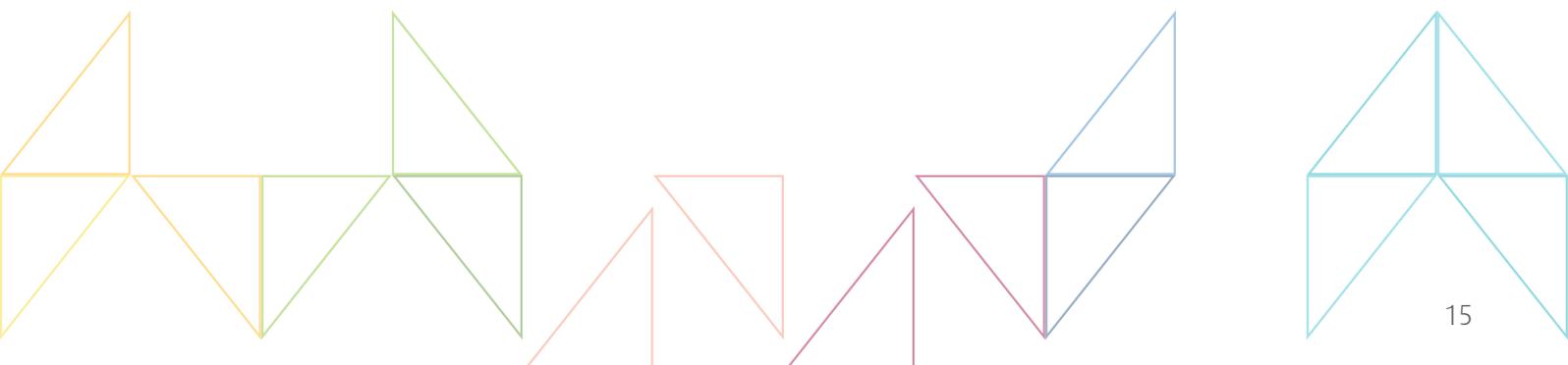


Figure 9 shows the ownership percentage of the ultimate controllers. Often, ultimate shareholders are identical to immediate shareholders. However, ultimate shareholders can also control listed firms indirectly through the ownership of immediate shareholders. Therefore, the ultimate shareholders' ownership shares of listed firms are calculated as

the sum of indirect ownership, defined by the ownership share of immediate shareholders on listed firms multiplied by ultimate shareholders' ownership share of immediate shareholders, and direct ownership of listed firms by ultimate shareholders. The average ownership shares of ultimate shareholders hovers between 30% and 40%.



Figure 9: Average ownership stake of immediate controllers

Figure 10 shows a drastic change between 2003 and 2004 in the composition of ultimate shareholders. Due to ownership reform and establishment of SASACs, the ownership of all SOEs transferred to central and local SASACs, as well as private individuals, on a large scale during this year. As a consequence, the cases in which SOEs are the ultimate shareholders dropped sharply from 45% in 2003 to 15% in 2004. Figure 10 shows that publicly listed firms ultimately controlled by local and central SASACs increased from 11% in 2003 to 21% in 2013 and from 2% in 2003 to 10% in 2013, respectively. Similarly, firms ultimately controlled by SOEs or government departments also decreased from 62% in 2003 to 9% in 2013. Most

of the SOEs controlled by central or local SASACs operate in industries of strategic importance to China. Thus, the increased number of firms ultimately controlled by central and local SASACs means that the locus of control for these strategically important SOEs shifted from direct ownership and control by SOEs and government to indirect ownership and control by SASACs. At the same time, firms ultimately controlled by individuals increased sharply from 13% in 2003 to 56% in 2013. Taken together, these trends show that, although the Chinese government pursued SOE reform, it has not given up controlling strategically important SOEs, merely shifting its control from direct to indirect via SASACs.

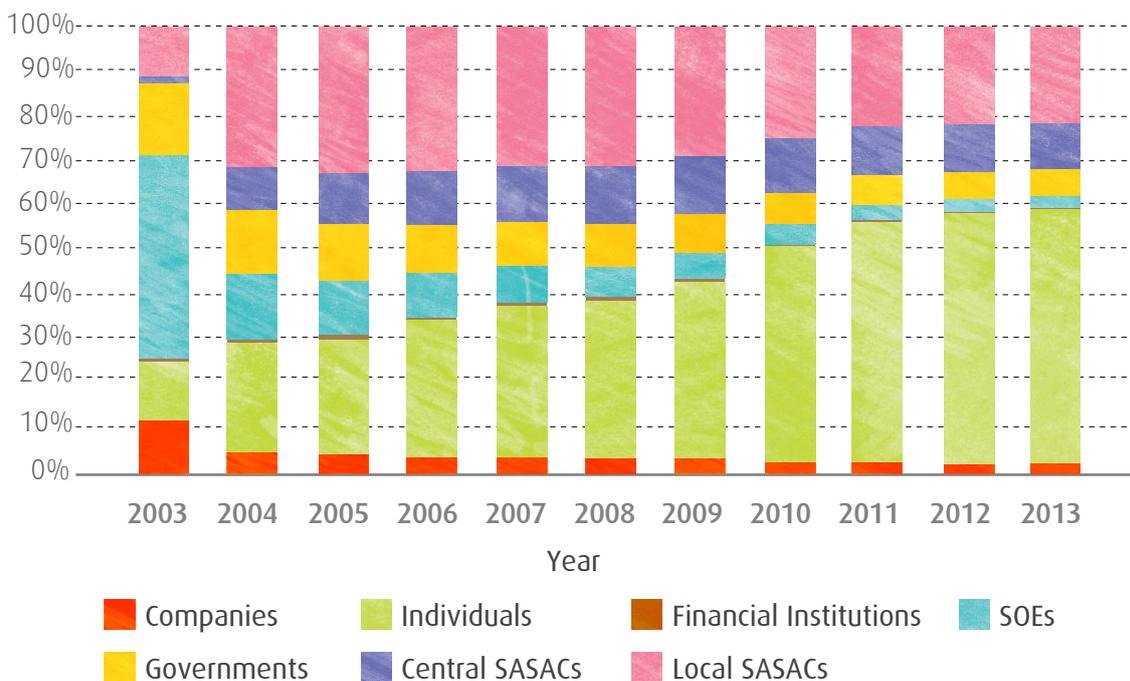


Figure 10: Composition of ultimate controllers

4 | Functions and Roles of SASACs

4.1 | Introduction of SASAC

In the beginning of SOE reform, different government ministries managed different state assets. For example, the Ministry of Finance determined capital investments in SOEs, while the National Development and Reform Commission planned operational decisions. The dispersed control rights, spread over different ministries, impeded SOEs from improving their operational efficiency. As outlined above, the SASAC was created to unite these various control rights in 2003. Since then, the SASAC has become a state agency used to represent the interests of the State as investor, supervising and administrating the state-owned assets of non-financial SOEs. At the same time, China remained committed to transforming the corporate governance system of SOEs into a modern, reasonably transparent process. In other words, the SASAC represents the scaling back of government authority through the creation of an arm's-length regulatory body designed to function as a powerful and authoritative board of directors (Du, Tang & Young, 2012).

As an important state apparatus, the SASAC reports directly to Shiye Danwei, a special public service unit of the State Council. According to the Interim Regulations on Supervision and Management of State-owned Assets of Enterprises³, both the State Council and governments at the provincial level have the authority to exercise government ownership. As such, the central SASAC was established directly under the

State Council, while local SASACs were established under various local governments. Both types of SASACs are independent state legal entities, with no superior-subordinate relationship. In line with this, the central SASAC published a list of central SOEs over which it exercises direct ownership. This list decreased from 196 firms in 2003 to 106 by the end of 2015 due to mergers and acquisitions. Other non-financial SOEs not included in this list are under the authority of local governments.

Authorized by the State Council and in accordance with the Company Law of the People's Republic of China and other administrative regulations, the SASAC has the following main functions:⁴

- Fulfill the duties of financier in the financed enterprise to maintain owner's rights and benefits in accordance with laws and administrative regulations, e.g., the Company Law, etc.;
- Guide and promote the reform and restructuring of SOEs and state holding enterprises;
- Designate a board of supervisors as stipulated;
- Appoint, dismiss, and evaluate chiefs of the financed enterprises according to legal procedures, and reward or punish the chief according to the result of these evaluations;

³ SASAC website: <http://en.sasac.gov.cn/n1408035/c1477199/content.html>

⁴ SASAC website: <http://en.sasac.gov.cn/n1408028/n1408521/index.html>

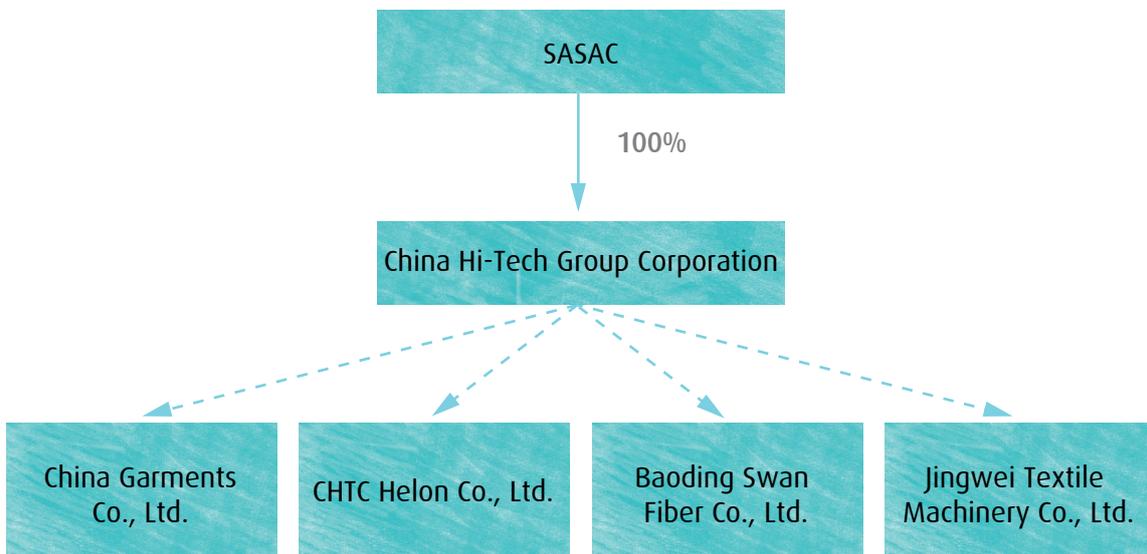
- Supervise the maintenance or addition of state-owned asset value of the enterprise by statistical and auditing means;
- Draft regulations and laws for the supervision and administration of state-owned assets.

In order to perform these functions described above, the SASAC presides over the pyramid of ownership structure with two or three tiers, sometimes more (Naughton, 2006) described above. Publicly listed SOEs are positioned at

the bottom of the pyramid with SASACs at the top. In the middle are parent companies--investment or holding companies, often SOEs. Figure 11 shows Dongfang Electric Corporation Limited's controlling structure as an example. Dongfang Electric Corporation Limited is immediately owned by Dongfang Electric Corporation, an SOE, both of which are ultimately owned by an SASAC. In some cases, SASACs indirectly control several listed SOEs simultaneously through common immediate shareholders, again often SOEs, like China High-tech Group in Figure 12.



Figure 11: A typical ownership and controlling structure of SASAC⁵



Note: We show only direct ownership stakes, though there can be indirect ownership through other subsidiaries not shown here.

Figure 12: A case where several listed SOEs are simultaneously controlled by the SASAC through the common immediate shareholder

⁵ Source: Dongfang Electric Corporation Limited 2013 Annual Report.

4.2 | Comparison between SASAC and Temasek

Temasek is an investment company owned by the Singapore government. It is commonly referred to as a sovereign wealth fund. Incorporated in 1974, Temasek owns and manages a portfolio of S\$405.8 billion as of 2015, mainly in Singapore and Asia (Temasek, 2015). It is an active shareholder and investor, with a portfolio covering a broad spectrum of sectors including financial services, telecommunications, media and technology, transportation and industrial, life sciences, consumer, real estate, as well as energy and resources.

Unlike the SASAC, Temasek is neither a government agency nor a statutory board. Rather, it operates as a commercial company under the provisions of the Singapore Company Act. Its sole shareholder is the Singapore Ministry of Finance. Like any other commercial company, Temasek pays taxes to tax authorities, distributes dividends to shareholders, and has its own board of directors and professional management team. Its solo shareholder, the Ministry of Finance, has the right to appoint, reappoint, or remove board members. However, the Ministry's right is subject to the President's approval, a measure that safeguards the integrity of the board and protects its reserves.⁶

Since Temasek has performed so reliably and efficiently in managing state-owned assets, the Chinese government adopted it as a role model. Like Temasek, the SASAC was designed *not* as a government department in order to keep the government's hands off state-asset operations.

There are, however, several differences. First and foremost, Chinese state-owned assets are much larger than those of Singapore. What's more, the Chinese political regime is different from Singapore's: the former is still governed by the Communist Party, while the latter is by free election. As a result, the SASAC is fundamentally different from Temasek on four key dimensions:

- The nature of these two organizations differs. As discussed earlier, the SASAC is designed as a special public service unit (Shiye Danwei). But it is still an arm-length regulatory body that represents the government. Furthermore, Chinese SOEs do not operate on a commercial basis and instead run like government branches. Central SOEs even have political ranks (Du, Tang & Young, 2012). Temasek, on the other hand, was set up as an investment company under the provisions of the Singapore Company Act. Temasek was therefore created to own and manage government linked companies on a commercial basis, effectively separating the government's shareholder role from its regulatory and policy-making functions (Israel, 2008).
- The structures of these two organizations differ. As a regulatory body, the SASAC designates all of its functional departments as Bureau (ju), following the government model. In fact, all staff are government officials with government backgrounds. In contrast, Temasek's management

⁶ *The State as Shareholders: The Case of Singapore*. CGIO Report. 2014.

style and structure resembles commercial companies. According to Temasek (Temasek, 2015), independent board members comprise its 13-member boards, with independent, non-executive directors chairing three central committees. The roles of Chairman and CEO are separate, occupied by two different individuals. Just four of the board members are current or former civil servants, with the majority coming from business backgrounds and some from outside Singapore.

- The decision rights differ. In China, CEOs and Chairmen of the Board of Central SOEs also have political titles and ranks. In fact, they are regarded as government officials. They are appointed by the Communist Party's Central Committee Organization Bureau, not by the Central SASAC. However, Temasek is directly involved in appointing CEOs and chairmen of the boards for their portfolio companies, despite having only partial shares like SASACs. Thus, Temasek can perform its monitoring and controlling function more actively than SASACs.
- The portfolios of state assets differ. The Chinese Government uses two different systems to manage non-

financial state-owned assets and financial state-owned assets. Non-financial SOEs are supervised by the SASAC. Financial SOEs, on the other hand, are managed by the China Central Huijin Investment Ltd., an investment company owned by the Chinese government. Temasek's portfolio, however, includes both financial firms as well as non-financial firms. For example, DBS Bank Ltd., a Singaporean multinational banking and financial services company, is under the supervision of Temasek. According to Temasek, financial service firms account for 28% of Temasek's portfolio (Temasek, 2015).

The SASAC now faces several challenges to improving the corporate governance of SOEs. SOEs in China have to pursue both commercial and non-commercial objectives, which reduce both accountability and sense of purpose. SASACs have to deal with the self-interested behaviors of managers, as well as politicians and bureaucrats who approach SOEs with their own objectives. In addition, they face more lenient information disclosure requirements than private sector firms, resulting in a lack of monitoring and financial market discipline.

5| Statistical Analyses of the Performance of SOEs in China

The sample for this study includes all publicly listed companies in China from 2003 to 2013, available from the CSMAR Database. In order to analyze the financial performance of listed firms, we restrict our sample to non-financial firms, since the performance of firms in the financial service sector is not directly comparable. The number of non-financial firms available in the CSMAR database nearly doubled, from 1,294 in 2003 to 2,499 in 2013.

This study uses two measures for firm performance. First, Return on Assets (ROA), defined as net income divided by total assets, is the most widely used measure for financial performance. We also use Tobin's Q to capture the future potential of a firm as capital market vs. replacement value, operationalized as market capitalization divided by a firm's total assets.

We incorporate several ownership type variables to capture the identities of immediate and ultimate controllers. For consistency with the descriptive analysis in Section 3, both immediate controllers and ultimate controllers are classified into the same 8 types: central SASAC, local SASAC, government, SOE, financial institutions, banks, individual, and companies. We find just two non-financial service firms directly owned

by banks and so exclude these from the sample. We further exclude 84 observations that belong to 37 firms with no identifiable immediate or ultimate shareholders. We incorporate several ownership dummy variables to note immediate and ultimate shareholders, while companies as immediate or ultimate controllers serve as a reference group. Thus, we incorporate six dummy variables for ultimate controllers. We incorporate five dummy variables for immediate controllers since the central SASAC does not have direct ownership of any listed firms.

This study also incorporates several control variables. Firm size, defined as the logarithm of assets, controls for any size-related factors affecting firm performance. Firm age, defined as the number of calendar years since establishment, is also included to control for any age related factors. Leverage is defined as total debt divided by total assets. Intangible asset intensity reflects the importance of a firm's intangible assets, defined as intangible assets divided by total assets, in affecting firm performance. Fixed asset intensity captures a firm's capital intensity.

Several observations with negative values in total assets, fixed assets, intangible assets, and liabilities are dropped as

outliers. In addition, this study excludes observations with ROAs greater than 100% or lower than -100%, and Tobin's Q values exceeding 10. After deleting outliers, we include 19,039 observations that belong to 2,501 firms.

Table 1 shows the descriptive statistics and Table 2 the regression models with ROA and Tobin's Q as dependent variables, respectively. These models incorporate ownership type variables and control variables. In addition, these models include industry and year fixed effects. Industry is defined according to the industry classification of Chinese listed companies using the 2012 version of the Industry Classification of Listed Companies that includes 86 industries, again excluding the financial service sector.

Since the ownership type variables of immediate and ultimate controllers may have multicollinearity problems, we enter them separately. Model (1) incorporates only the immediate controller. We find that when the immediate controllers are individuals, ROA is an average of 0.834% points higher than the reference group of firms whose immediate shareholders are companies. This means that when there is a large ownership stake by private individuals, they will exercise ownership control to improve financial performance.

On the other hand, when the immediate controllers are government ministries, a firm's ROA is an average of 2.083% points lower than firms in the reference group, suggesting that direct government ownership has a detrimental impact on firm performance. Similarly, when the immediate controllers are SOEs, a firm's ROA is an average of 0.980% points lower compared to the reference group. Similarly, when the ultimate controllers are non-bank financial institutions, mostly asset management companies dealing with bad assets, their performance is 2.168% points lower than those in the reference group.

Model (2) includes only the ultimate controllers. Results suggest that when central SASACs are the ultimate controllers, a firm's ROA is 0.790% points lower than firms in the reference group. When the local SASAC is the ultimate controller, a firm's performance is not significantly different from that of the reference group. Similarly, firms whose ultimate controllers are private individuals outperform those in the reference group by 0.884%. Regression models (1) and (2) use ROA as the performance indicator to show that listed firms under direct or indirect supervision of local SASACs perform at a similar level to firms in the reference group, while those under the immediate control of SOEs, governments,

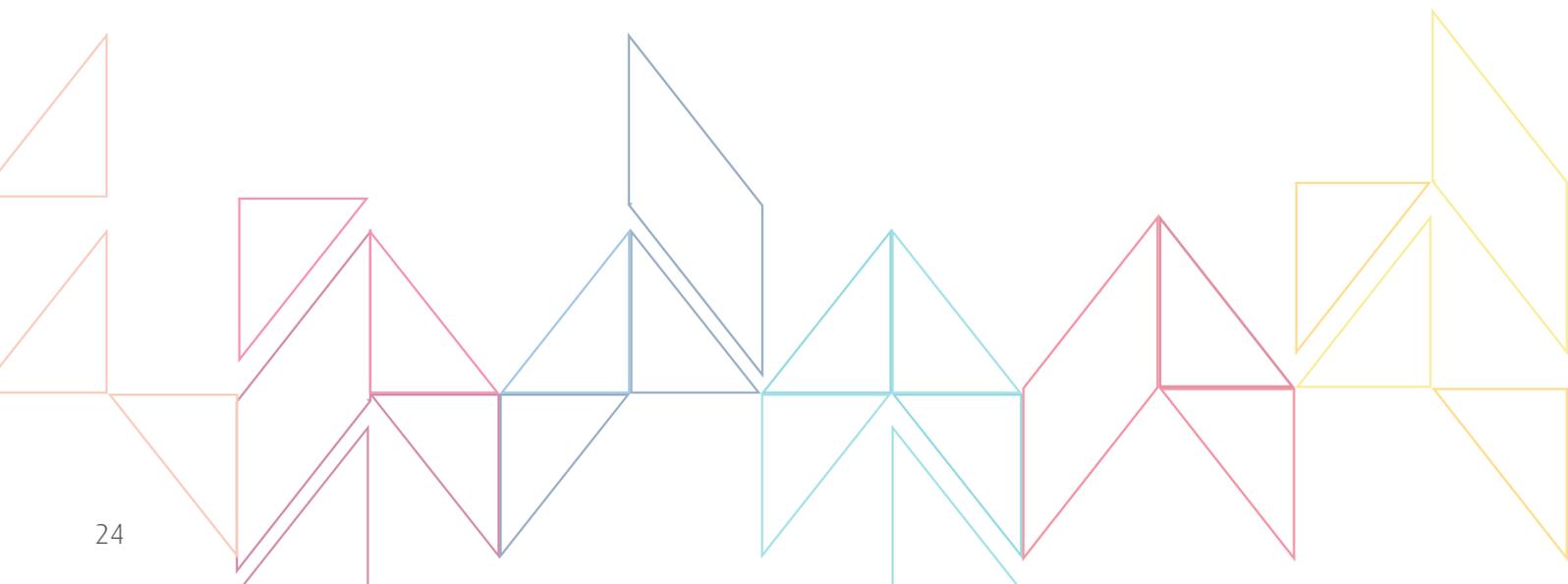
and financial institutions are generally underperforming. Yet, firms under the indirect supervision by central SASACs, i.e., when central SASAC is the ultimate controller, tend to underperform vis-à-vis firms in the reference group.

Models (3) and (4) show the regression results using Tobin's Q as the outcome variable. Estimations using Tobin's Q to gauge performance exhibit a similar negative impact of direct government control. Tobin's Q, however, is positively significant for those firms immediately controlled by financial institutions, possibly evaluating the future prospect for turnarounds of firms owned by asset management companies. On the other hand, firms with individuals as immediate shareholders have lower future prospects than firms in the reference group.

Model (4) shows the regression results for Tobin's Q using the ultimate controllers ownership category. When

ultimate controllers are central SASACs, SOEs, or financial institutions, their Tobin's Qs are significantly higher than those in the reference group of firms ultimately controlled by companies, thereby suggesting more positive future performance for these firms.

Overall, the statistical analyses of firm performance gauged by profitability show that firms under the supervision of SASACs do not necessarily outperform those owned by individuals and companies and perform only slightly better than firms under the direct ownership of government and SOEs. SASACs are supposed to be specialized, state-owned assets management organizations and so should have experts managing SOEs more efficiently than government ministries. Yet, their performance has been disappointing. However, the models using Tobin's Q suggest high potential for the future performance of firms under the ultimate control by the central SASAC.



6| Conclusion and Policy Implications

To summarize the findings from the descriptive statistics and statistical analyses, it appears that both direct and indirect government ownership have a detrimental impact on the performance of publicly listed firms in China. Firms with direct government ownership and immediate control demonstrate the worst performance. Performing slightly better are firms indirectly owned by the government, through SOEs or through local and central SASACs. In contrast, firms whose immediate and ultimate controllers are private individuals perform best, followed by firms controlled by companies. Taken together, these results suggest that further privatization of state ownership may be required to improve the performance of listed firms in China. This coincides with the increasing private ownership of listed companies in China, as examined in the descriptive analysis, suggesting change in the right direction.

This study underscores the need for SASAC reform. The SASAC owns state assets without exercising ownership control to monitor the performance of their portfolio companies. The Chinese government may therefore want to consider reforming the SASAC to be an active investor in order to strengthen its monitoring function. This reform should focus on removing the several layers of ownership structures that prohibit SASACs from playing an active role in monitoring and controlling firms that fall under their umbrellas. Streamlining this chain of ownership and placing portfolio companies under the direct supervision of SASACs may improve the performance of SOEs in China and, thus, the Chinese economy overall.

Table 1

Descriptive statistics for statistical analyses

	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 ROA(%)	3.34	8.42	1.00																	
2 Tobin's Q	1.70	1.03	0.09	1.00																
3 Immediate-local SASACs	0.02	0.13	-0.02	-0.03	1.00															
4 Immediate-SOEs	0.54	0.50	-0.07	-0.09	-0.14	1.00														
5 Immediate-Governments	0.01	0.07	-0.02	-0.02	-0.01	-0.07	1.00													
6 Immediate-Financials	0.01	0.07	-0.05	0.03	-0.01	0.03	-0.01	1.00												
7 Immediate-Individuals	0.13	0.34	0.12	0.01	-0.05	-0.42	-0.03	-0.03	1.00											
8 Ultimate-local SASACs	0.26	0.44	-0.04	-0.07	0.20	0.48	-0.04	-0.04	-0.23	1.00										
9 Ultimate-central SASACs	0.11	0.31	-0.02	-0.02	-0.05	0.33	-0.02	-0.01	-0.14	-0.21	1.00									
10 Ultimate-SOEs	0.09	0.29	-0.03	-0.04	-0.03	0.29	-0.02	0.04	-0.12	-0.18	-0.11	1.00								
11 Ultimate-Governments	0.09	0.29	-0.03	-0.02	-0.02	0.26	0.19	0.06	-0.12	-0.19	-0.11	-0.10	1.00							
12 Ultimate-Financials	0.01	0.08	-0.01	0.03	-0.01	0.02	-0.01	0.25	-0.03	-0.05	-0.03	0.14	-0.02	1.00						
13 Ultimate-Individuals	0.42	0.49	0.09	0.12	-0.11	-0.88	-0.06	-0.04	0.46	-0.50	-0.29	-0.26	-0.27	-0.06	1.00					
14 Firm size	21.55	1.25	0.09	-0.26	0.02	0.29	-0.03	-0.03	-0.18	0.19	0.23	-0.02	-0.02	-0.02	-0.29	1.00				
15 Firm age	12.82	5.80	-0.04	0.14	0.07	-0.01	0.01	0.05	-0.12	0.10	-0.01	-0.10	-0.04	0.05	-0.02	0.10	1.00			
16 Fixed asset intensity	0.28	0.18	-0.11	-0.07	0.05	0.22	0.01	-0.01	-0.20	0.12	0.06	0.06	0.10	0.00	-0.25	0.10	-0.02	1.00		
17 Intangible asset intensity	0.05	0.07	-0.04	0.09	-0.01	-0.02	-0.02	0.00	0.00	0.03	-0.06	-0.05	0.02	-0.01	0.03	-0.04	0.07	-0.02	1.00	
18 Leverage	0.49	0.36	-0.31	0.05	0.03	0.10	0.00	0.08	-0.21	0.08	0.04	0.03	0.01	0.04	-0.11	0.07	0.13	0.10	0.03	1.00

Table 2

Financial performance of publicly listed firms in China

Dependent variables Independent variables	ROA		Tobin's Q	
	1	2	3	4
<u>Immediate controllers</u>				
Local SASACs	-0.328 (0.438)		-0.080 (0.051)	
SOEs	-0.980** (0.133)		0.016 (0.016)	
Governments	-2.083** (0.800)		-0.329** (0.094)	
Financial institutions	-2.168** (0.741)		0.376** (0.087)	
Individuals	0.834** (0.189)		-0.296** (0.022)	
<u>Ultimate controllers</u>				
Local SASACs		-0.358 (0.306)		-0.007 (0.036)
Central SASACs		-0.790* (0.335)		0.180** (0.039)
SOEs		0.268 (0.334)		0.130** (0.039)
Governments		-0.524 (0.338)		-0.016 (0.040)
Financial institutions		0.629 (0.729)		0.297** (0.086)
Individuals		0.884** (0.302)		-0.016 (0.035)
<u>Control variables</u>				
Firm size	0.811** (0.051)	0.828** (0.052)	-0.280** (0.006)	-0.275** (0.006)
Firm age	-0.024* (0.011)	-0.030** (0.011)	0.012** (0.001)	0.014** (0.001)
Fixed asset intensity	-4.465** (0.367)	-4.491** (0.367)	-0.023 (0.043)	0.030 (0.043)
Intangible asset intensity	-7.045** (0.844)	-7.175** (0.845)	0.219* (0.099)	0.300** (0.099)
Leverage	-5.994** (0.158)	-6.112** (0.157)	0.265** (0.019)	0.299** (0.018)
Constant	-11.386** (1.210)	-12.507** (1.268)	7.130** (0.142)	6.923** (0.149)
Year fixed effect	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes
Observations	19039	19035	19039	19035
Number of firms	2501	2501	2501	2501
Adjusted R-squared	0.153	0.153	0.301	0.296

Note: Standard errors in parentheses. ** p<0.01, * p<0.05, + p<0.1

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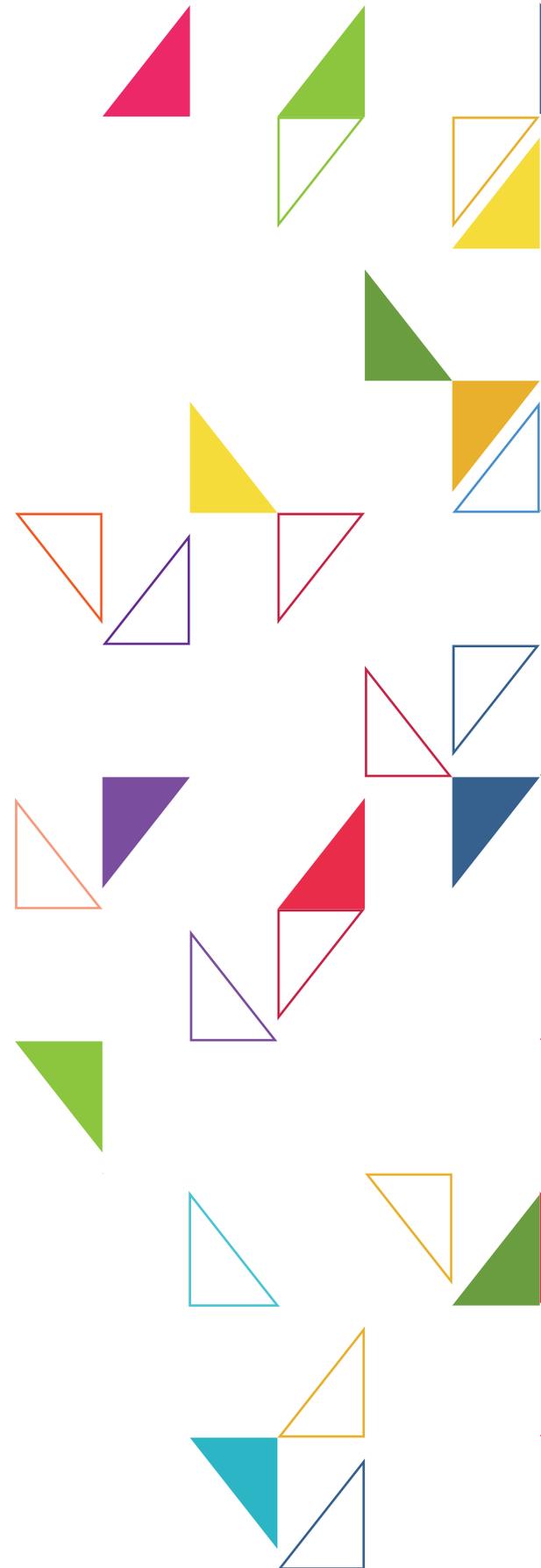
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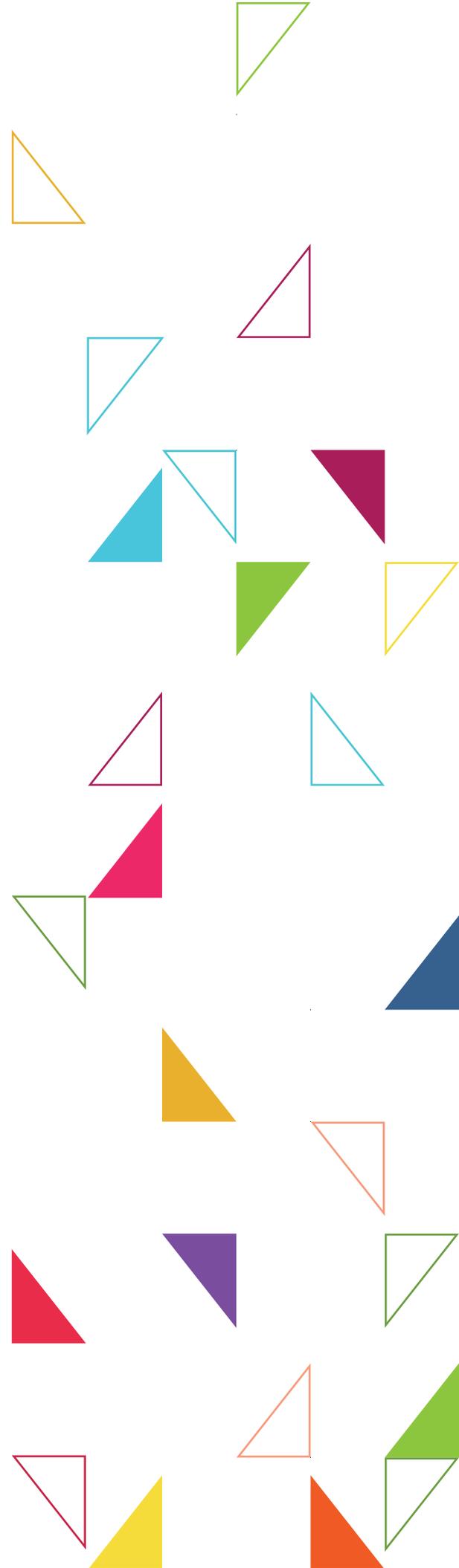
| About the Report

This report is a three-year joint collaboration between the Centre for Governance, Institutions and Organisations at NUS Business School and the Chartered Institute of Management Accountants. The focus of the research initiative is to conduct studies on State Owned Enterprises in Asia.

This study 'The Performance of State Owned Enterprises in China: An Empirical Analysis of Ownership Control through SASACs' completes the trilogy research reports.

The first report was about Temasek Holdings, its ownership and governance of Singapore-listed Government-linked Companies and Government-linked Real Estate Investment Trusts. The second report was on Vietnam and the role and impact of its state sector on the economy.

All three reports can be accessed at CGIO website:
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