State Controlling Shareholders and Payout Policy

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Abstract

We study the role of state controlling shareholders in corporate payout policy. The State Capital Operation Program in China requires *parent* central state-owned enterprises (CSOEs) to contribute part of their consolidated income to a new fiscal fund. We find that *listed* CSOEs, partially controlled by *parent* CSOEs, experience significant reductions in dividend payouts as the income-contribution ratio increases. The dividend reductions are concurrent with increases in intragroup resource transfers—*listed* CSOEs' loans to, and commercial trades with, group peers. The program yields adverse consequences for *listed* CSOEs' investment and employment, yet being mitigated by group-level dividend reductions.

I.   Introduction

Payout policy is among the most important corporate decisions for managers. Despite accumulating evidence on the determinants of payout policy, the literature has largely overlooked the role of controlling shareholders. DeAngelo, DeAngelo, and Skinner (2008) state that controlling shareholders' preferences can exert a first-order impact on payout policy and that such an impact has been underexplored.[1]

[1]An exception is the study of Faccio, Lang, and Young (2001) who explore the role of family controlling shareholders in shaping the dividend policies of firms affiliated with business groups.

Among varying forms of controlling shareholders, the state is regarded as an influential one, accounting for approximately 20% of stock market capitalization worldwide (*The Economist* (2014), Borisova, Fotak, Holland, and Megginson (2015), and OECD (2018)). Given the global prevalence of state ownership, we study whether and how state controlling shareholders affect firms' payout policies.

To this objective, we exploit the State Capital Operation Program (hereafter the program) in China, which imposes a significant and measurable shock on state controlling shareholders' incentives. The program intends to form a fiscal fund by requiring parent central state-owned enterprises (parent CSOEs), which are 100% owned by the central government, to contribute a portion of their consolidated after-tax income in the form of mandated dividends. The fund's capital would later be utilized to finance the state's multiple objectives, such as rescuing distressed CSOEs, subsidizing strategically important industries, and contributing to the public pension account.

The program constitutes a suitable setting for our research question due to the prevalence of state-controlled business groups in China (Huang, Li, Ma, and Xu (2017)). By our estimates, state-owned enterprises (SOEs) accounted for 52% of Chinese listed companies during our sample period (2003–2014) and were affiliated with business groups for institutional causes. Before the inception of the Shanghai and Shenzhen Stock Exchanges in the 1990s, China's state assets were managed under a central planning system. With the objective to establish a socialist market economy and a modern corporation system, China began SOE reforms by spinning off state assets from parent SOEs. The state partially privatized these assets through initial public offerings (IPOs) at the two newly initiated stock exchanges (Sun and Tong (2003)). This process created state-owned corporate pyramids, that is, business groups. The pyramid-like structure of business groups is important in China and also prevalent around the world (see, e.g., Almeida and Wolfenzon (2006), Morck and Yeung (2013), (2014), Ferreira, Matos, and Pires (2018), Faccio, Morck, and Yavuz (2021), and Faccio and O'Brien (2021)).

Within China's state-owned corporate pyramids, a state asset management *agency* (e.g., the State-owned Assets Supervision and Administration Commission, known as the SASAC) sits at the apex of the pyramid as the ultimate owner. The agency does not manage or operate state assets. Instead, there are state asset management companies, 100% owned by the agency and positioned one layer down the pyramid. These companies, known as the *parent* CSOEs, control *listed* central state-owned enterprises (listed CSOEs) either directly through equity holdings or indirectly through intermediate pyramidal layers.[2]

Importantly, the State Capital Operation Program requires parent CSOEs to contribute a portion of their annual profits, that is, consolidated net income attributable to the parent company, to the state. The program intends to utilize the profits of state-owned firms to enhance China's fiscal resources. The program introduced a series of mandates that have been gradually released since 2007. The initial mandate in 2007 required parent CSOEs in monopolistic industries and those in generally

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[2]Figure IA.1 in the Supplementary Material illustrates the organizational structure of the business group controlled by China Resources National Corporation, a state asset management company positioned one layer down the SASAC.

competitive industries to turn in 10% and 5% of their annual net income, respectively. In 2010, both proportions were further increased by 5%. Furthermore, the 2010 mandate and a third mandate released in 2012 required additional parent CSOEs to begin turning in 5% of their net income. The latest mandate was issued in May 2014, increasing the percentage of profits to be turned in by an additional 5%. The staggered adoption feature of the program allows the government to optimize policies through experimentation (Brunnermeier, Sockin, and Xiong (2017)) and, importantly, provides us with an identification advantage—parent CSOEs (controlling shareholders), and therefore listed CSOEs (our treatment firms), receive treatment at different points in time and to varying degrees.

We exploit the program by examining its impact on payout policies of listed CSOEs in which parent CSOEs hold controlling, yet partial stakes. We hypothesize that because the program taxes parent CSOEs to meet state objectives, parent CSOEs have incentives to reduce the pro rata cash dividends of their partially controlled listed CSOEs to maintain the pre-program level of resources within the business group. As de facto government officials, CSOE group managers compete in a closed pyramidal labor market for political ranks (Deng, Morck, Wu, and Yeung (2015), Chen, Kim, Li, and Liang (2018)). Their promotions and demotions depend critically on economic indicators (e.g., asset value appreciation and economic value-added) and harmonious indicators (e.g., avoiding layoffs), both of which can be improved by retaining more resources within the business group. As the program mandates resources from CSOE groups, reducing dividends paid to outside shareholders helps CSOE group managers retain group resources.

However, a competing hypothesis exists, as parent CSOEs may choose to increase dividend payouts of listed CSOEs. Parent CSOEs could increase dividend payouts of listed CSOEs and reinvest their share of received dividends across firms within CSOE groups (Gopalan, Nanda, and Seru (2014)). The main distinction between these two competing hypotheses has to do with the parent CSOEs' incentives and abilities to transfer the listed CSOEs' resources.

Using a sample of listed CSOEs for 2003–2014 and employing a difference-in-differences (DiD) identification strategy, we find that as the parent CSOE's profit-returning ratio increases, listed CSOEs significantly reduce cash dividends.[3] The dividend reduction did not occur prior to the program's initiation, reflected by parallel trends of treated- and control firms' pre-program dividend yields. Upon the program's initiation, however, there is an immediate, and subsequently lasting, effect of dividend reductions of treated listed CSOEs' dividend reductions.

The amount of dividend reductions is material from a CSOE group's perspective. To see this, we compute an offset ratio (the ratio of retained cash dividends attributable to noncontrolling shareholders of all listed CSOEs within a group to

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[3]As an alternative form of corporate payout, share repurchases have been rare in China's capital market. During the 20-year period from the establishment of China's capital market to 2012, public firms in China announced a total of 171 share repurchases, less than 10 per year on average (Li, Liu, Ni, and Ye (2017)). That is because Article 143 of the 2005 Company Law in China only allows firms to buy back shares under limited circumstances such as to adjust ownership structure or to assist the firm's equity incentive plans. Untabulated analyses suggest that, during 2014 (our sample ending year), repurchased shares accounted for only 0.02% of the stock market capitalization in China.

the amount of group-level earnings mandated by the government during the same year).[4] We find a median value of 26.1% of the offset ratio, that is, a median group retains roughly a quarter of the government-mandated resources by reducing affiliated listed CSOEs' cash dividends. Furthermore, the offset ratio increases with the weighted-average noncontrolling ownership of a CSOE group (weighed by each listed CSOE's year-end market capitalization). It equals 16.53% for the subsample with the lowest-, 29.55% for the medium-, and 32.74% for the highest weighted average noncontrolling ownership. These findings are consistent with the hypothesis that the State Capital Operation Program leads to dividend reductions for listed CSOEs because parent CSOEs intend to retain the pre-program level of resources within their business groups.

The above discussion hinges on the assumption that the *parent* CSOE will utilize and reallocate the retained dividends of the *listed* CSOE within the business group. Such a notion has its rationale as listed CSOEs constitute the major and profitable subsidiaries of a CSOE business group.[5] To further corroborate this notion, we examine whether intragroup resource reallocations become more frequent when the profit-returning ratios increase, especially for transactions involving cash outflows from listed CSOEs. We consider two channels through which the state controlling shareholder can shift resources away from the listed CSOE: i) intercorporate loans with the listed CSOEs as creditors (Jiang, Lee, and Yue (2010)) and ii) the listed CSOEs' commercial trades with related parties within the CSOE group (Jian and Wong (2010)).[6] We find that listed CSOEs experience significant increases in their intercorporate loans to, and commercial trades with, their related parties when the parent CSOEs' profit-returning ratios increase, further supporting the latter's incentives to reduce listed CSOEs' dividends to maintain group resources.

The tendency for parent CSOEs to maintain resources within the group and the ensuing dividend reduction of listed CSOEs can be traced to group managers' career incentives. CSOE managers' career outcomes depend heavily on the SASAC's triennial evaluations, which assign significant weight to economic indicators (e.g., asset value appreciation and economic value-added) and harmonious indicators (e.g., avoiding layoffs). Both dimensions can be improved by retaining more resources within the business group to support group firms' investment and employment.

To corroborate this notion, we examine the implications of the program, and the dividend reductions, for corporate investment and employment. These two indices have been shown to significantly influence evaluations and career outcomes of CSOE group managers, and therefore their incentives (Gu, Tang, and Wu (2020)). We find that the increase in a parent CSOE's profit-returning ratio

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[4]We thank an anonymous reviewer for suggesting this construct and its economic meaning.

[5]Upon the initiations of China's two major stock exchanges—the Shanghai and the Shenzhen stock exchanges, China's state-owned groups mainly listed their profitable and "*high quality*" assets to raise equity capital. The State Council Information Office announced in 2011 that listed CSOEs account for 52.88% of total assets and more than 90% of total profits of CSOE business groups.

[6]Commercial trade constitutes the predominant form of related party transactions among Chinese firms.

causes significant reductions in its controlled, listed CSOEs' capital expenditures and employment growth when the CSOE group exhibits less effort to retain resources through cutting dividends. Importantly, when the parent CSOE retains more dividends, listed CSOEs experience less decreases in capital expenditures and employment growth. These findings corroborate the notion that CSOE group managers' career incentives significantly shape listed CSOEs' payout policy responses to the parent CSOEs' increases in profit-returning ratios.

Finally, we address the value implication of the State Capital Operation Program. We argue that the program, through its effect on listed CSOEs' dividend policy, would jeopardize the interests of outside shareholders and lower their valuations of listed CSOEs. We conduct an event study by examining cumulative abnormal stock returns of listed CSOEs around announcements of profit-returning ratio increases for parent CSOEs. We find significant and negative share price reactions to increases in parent CSOEs' profit-returning ratios. Economically, a 5% ratio increase is associated with 0.32%–0.93% value loss of the affiliated, listed CSOE, depending on the event window chosen. Therefore, state controlling shareholders' incentives result in sub-optimal dividend policies that hurt minority shareholders' interests.

Our study provides several important contributions to the literature on dividend policies. We show whether and how state controlling shareholders' objectives affect dividend payouts. DeAngelo et al. (2008) propose that the idiosyncratic preferences of controlling shareholders can have a first-order impact on firms' payout policies, particularly in non-US firms where concentrated ownership is the norm. We highlight an influential and prevalent type of controlling shareholder in capital markets around the world—the state (Borisova et al. (2015), Megginson (2017), and OECD (2018)). Building on a fiscal regime change—the State Capital Operation Program in China—we document a causal and significant effect of state controlling shareholders' incentives on corporate payout policies.

In a closely related study, Faccio et al. (2001) show that dividends can be used to contain controlling shareholders' expropriation within family-controlled business groups. There are three notable differences between our study and that of Faccio et al. (2001). First, whereas Faccio et al. (2001) focus on family-controlled business groups, we examine state-controlled business groups. Second, our study introduces a methodological advantage by seeking identification from the State Capital Operation Program, which introduces plausibly exogenous shocks to state controlling shareholders' incentives to retain resources within their groups. Third, we provide related evidence of the implications of the dividend-expropriation link, including intragroup capital flows and firm valuation. Our findings therefore complement those in Faccio et al. (2001) to form a more complete picture of the role of controlling shareholders in corporate payout policies.

Our study also echoes the call in Farre-Mensa, Michaely, and Schmalz (2014) that "One promising area of future research is to further analyze the interaction of payouts with other corporate financing decisions" (p.126). We document that listed CSOEs' dividend reductions are accompanied by increasing intercorporate loans and related party transactions (i.e., two primary channels of intragroup capital flows). We further corroborate our dividend thesis with analyses of listed CSOEs'

capital investments and employment growth, and ultimately the valuation implication. Several recent studies also adopt this framework (Bonaimé, Hankins, and Harford (2014), He, Tian, Yang, and Zuo (2020), and Farre-Mensa, Michaely, and Schmalz (2021)). Different from these studies that focus on stand-alone firms, our work forms an "*ecosystem*" view of dividend payout for business groups—the dominating organizational form outside the US (see, e.g., Almeida and Wolfenzon (2006), Morck and Yeung ((2013), (2014)), Ferreira et al. (2018), Faccio et al. (2021), and Faccio and O'Brien (2021)).

II. Institutional Background

A. Partial Privatization and CSOE-Controlled Business Groups

Upon the inceptions of the Shenzhen and Shanghai Stock Exchanges in the 1990s, state-owned enterprises engaged in equity carve-outs to form subsidiaries eligible for listing on stock exchanges. However, as noted in Fan, Morck, and Yeung (2011) and Morck and Yeung (2014), the Chinese government has been careful to uphold the principle of "market socialism with Chinese characteristics" to prevent a potential shift in political ideology. Therefore, the state only floated minority interests in these listed subsidiaries while maintaining controlling stakes (Calomiris, Fisman, and Wang (2010)). The partial privatization resulted in state-owned business groups. Such an organizational structure is similar to the family-controlled business groups commonly observed in other economies, for example, business chaebols in South Korea (Bae, Kang, and Kim (2002)), except that the controlling shareholder is the state.

In Mar. 2003, the State Council of China formed the State-owned Assets Supervision and Administration Commission (SASAC) to reform SOEs and facilitate the clarification of property rights. The SASAC fully owns central state-owned enterprises (CSOEs) and sits at the apex of state-formed business groups. Importantly, the SASAC is empowered to formalize and release regulations imposed on CSOEs under its control.[7]

B. The State Capital Operation Program and Fiscal Fund Initiation

On Sept. 8, 2007, the State Council (Guo Wu Yuan) released the "Opinions of The State Council on The Pilot Implementation of State-owned Capital Operating Budget (Guofa No. 26, 2007)," also known as the State Capital Operation Program. As the ultimate owner of state-owned enterprises, the state intended to use its share of SOE profits to contribute to China's fiscal resources. Specifically, the program mandates central stated-owned enterprises (CSOEs) to begin returning profits to the state. Notably, the requirement only applies to parent CSOEs over whom the government has direct and complete control (i.e., 100% share ownership).

To further understand the fiscal incentive for the state's initiation of this program, we retrieve data on this fiscal fund's expenditure details from 2010 to

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[7]In the Supplementary Material (Figure IA.1), we provide an illustrative example of the business group controlled by China Resources National Corporation (i.e., a parent CSOE that is fully owned by the SASAC).

TABLE 1

Fiscal Fund Expenditure of the State Capital Operation Program

Table 1 shows expenditure details of the fiscal fund formed through the State Capital Operation Program from 2010 to 2014. Data period begins in 2010 because this is the first year that China's Ministry of Finance (MOF) provides data on fund expenditures. As of Dec. 31, 2014, 1 US dollar = 6.119 Chinese Yuan (Renminbi), as reported by People's Bank of China (i.e., China's central bank). Data source: Bureau of Budget, Ministry of Finance of the People's Republic of China (http://yss.mof.gov.cn/).

| | | Expenditure Amount in Billion Yuan | | | | |
| | | (% of Annual Total Fund Expenditure) | | | | |
No.	Category	2010	2011	2012	2013	2014
1	National economy and major projects	31.08 (57.34%)	51.48 (66.90%)	41.27 (44.39%)	64.16 (65.59%)	89.06 (62.76%)
2	Restructuring expenditures	0.00 (0.00%)	8.00 (10.40%)	8.94 (9.61%)	0.00 (0.00%)	0.00 (0.00%)
3	Industries upgrade and development	6.20 (11.44%)	10.56 (13.73%)	24.01 (25.82%)	15.39 (15.73%)	13.79 (9.72%)
4	Oversea investment and cooperation	2.24 (4.13%)	2.32 (3.01%)	11.60 (12.48%)	8.42 (8.60%)	18.10 (12.76%)
5	Subsidies for distressed firms' employees	0.47 (0.87%)	0.54 (0.70%)	0.44 (0.47%)	1.42 (1.45%)	0.39 (0.27%)
6	Contributions to pension	12.71 (23.45%)	0.05 (0.07%)	1.72 (1.85%)	1.93 (1.97%)	2.16 (1.52%)
7	Contributions to the public fund	1.00 (1.85%)	4.00 (5.20%)	5.00 (5.38%)	6.50 (6.64%)	18.40 (12.97%)
8	Retained fund	0.50 (0.92%)	0.00 (0.00%)	0.00 (0.00%)	0.00 (0.00%)	0.00 (0.00%)
	Annual fund expenditure (billion Yuan)	54.20	76.95	92.98	97.82	141.89

2014.[8] Table 1 presents the breakdown of the fiscal fund's expenditures during this period. Each expenditure category is coded with a corresponding yearly amount (in billion yuan) and its proportion of yearly total fund expenditures. We observe a sporadic pattern in each category's annual fraction of total fund expenditures. This is expected because the government's fiscal policies and objectives vary significantly across the years.

The category "*National Economy and Major Projects*" refers to activities such as rescuing distressed SOEs and subsidizing SOEs' reconstruction activities after catastrophic events. For example, in 2009, the SASAC directly injected capital into the airline industry that had been severely hit by the 2008 financial crisis.

The category "*Industries Upgrade and Development*" highlights the SASAC's use of the fund to support China's industrial policies. For instance, the state has paid heightened attention to environmental protection and has therefore promoted the production of green energy vehicles—consuming mainly electricity instead of gasoline—with subsidies from the fund. In Nov. 2010, the SASAC announced the agency's objective to support technology development related to power batteries (i.e., a critical device in the green energy vehicle).

In addition to these economic activities, fund resources have also been utilized to address social objectives. For instance, in 2010, 23.45% of the fund was allocated

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[8]The year 2010 is the initial year when the official data on expenditure details of this fiscal fund became available. The year 2014 is our sample ending year. Media articles and government announcements reveal some information on fund expenditures for the pre–2010 period as well. This information is detailed in our subsequent discussions.

to the public pension account (category "*Contributions to Pension*") to respond to China's shrinking labor force and aging population (Fang and Feng (2018)).

Overall, the institutional design of the fund provides us an important advantage. Traditionally, researchers have encountered difficulty in capturing the state's objectives—SOEs' controlling shareholder's incentives, being either economic or social. However, the newly initiated fiscal fund under the program is designed to cover the state's broad and dynamic objectives, with actual fund expenditures to be determined when the objectives emerge in subsequent years.

C.   CSOEs' Staggered Adoptions of the Program

The staggered adoption feature of the program also provides us a methodological advantage as the program has been implemented through a gradualistic approach, commonly observed in China's economic reforms (Brunnermeier et al. (2017)). On Dec. 11, 2007, the Ministry of Finance (MOF) and the State-owned Assets Supervision and Administration Commission (SASAC) jointly announced a mandate requiring parent CSOEs to begin returning profits to the state. The initial mandate classifies the parent CSOEs into five categories:

Category I	The China Tobacco Corporation
Category II	Central state-owned enterprises in monopolistic industries, including petroleum, mining, telecommunication, and electrical power
Category III	Central state-owned enterprises in generally competitive industries, including transportation, steel, trade and commerce, and construction
Category IV	Central state-owned enterprises in military related industries and those affiliated with scientific research institutions
Category V	The China Grain Reserves Corporation and the China Cotton Reserve Corporation

Appendix A summarizes and presents the profit-returning percentages of parent CSOEs, by categories and subperiods. Starting in 2007, the parent CSOEs in categories I and II were mandated to return 10% of their profits to the state; those in category III were mandated to return 5% of their profits. The parent CSOEs in category IV were given an initial 3-year exemption. Finally, the parent CSOEs in category V were not mandated to return any profit. Note that these enterprises are *parent* CSOEs with partial holdings in *listed* CSOEs (i.e., our treated firms).

On Dec. 29, 2010, the Ministry of Finance announced a second mandate which increased the profit-returning ratios of parent CSOEs in categories I, II, III, and IV by 5%. Further, the 2010 mandate included parent CSOEs affiliated with additional government agencies, such as the Ministry of Education, the Ministry of Culture, the Ministry of Agriculture, and the State Administration of Radio, Film, and Television. These newly included parent CSOEs began to return 5% of their net income to the state.

The third mandate, issued on Jan. 13, 2012, required parent CSOEs affiliated with government agencies such as the Ministry of Health, the Ministry of Information and Technology, and the State Administration of Sports to begin turning in 5% of their net income. In addition, the profit-returning ratio of the China Tobacco Corporation increased by 5% to reach 20%.

On May 6, 2014, the Ministry of Finance announced that the profit-returning ratios of parent CSOEs, except those in category V, increased by another 5%.

III.   Data, Sample and Identification Strategy

A.   Data and Sample Formation

To perform our empirical analyses, we compile data from different sources. We obtain filings of government mandates from the website of China's Ministry of Finance to identify parent CSOEs that are required to return profits to the state, along with their profit-returning proportions. We manually code these data by reading each of the following filings:

[*Caiqi No.* 309, 2007]	"The Notice of Interim Procedures to Administrate Central State-owned Enterprises' Income"
[*Caiqi No.* 392, 2010]	"The Notice of Revising the Budget Plan of Central State-owned Enterprises"
[*Caiqi No.* 3, 2012]	"The Notice of Expanding the Budget Plan of Central State-owned Enterprises"
[*Caiqi No.* 59, 2014]	"The Notice of Further Increasing the Returning Proportion of Central State-owned Enterprises' Income"

We obtain data on listed CSOEs' fundamentals and stock prices from the China Stock Market and Accounting Research (CSMAR) database. Our sample period covers 2003 to 2014. It begins in 2003 because the SASAC, the entity that currently owns and supervises CSOEs, was established in 2003. To identify listed CSOEs, we manually read the information of each public firm's ownership chain disclosed in its annual report.[9]

We begin with 3,536 firm-year observations for listed CSOEs. We exclude 90 observations for firms in the financial industry and 369 observations with missing values for variables required in the empirical analyses. Our primary empirical sample consists of 3,077 firm-year observations for 314 unique listed CSOEs.

B.   Identification Strategy

As the program is characterized by staggered adoption reforms, the profit-returning ratios of parent CSOEs exhibit cross-sectional and time-series variations. Drawing upon such exogenous variations, we estimate the following equation (1) to analyze the effect of the program on listed CSOEs' economic outcome:

$$(1) \qquad y_{i,t} = \alpha_i + \alpha_t + \delta_1 \mathrm{RATIO}_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}.$$

In equation (1), the dependent variable $y_{i,t}$ measures listed CSOEs' economic outcomes (e.g., dividend yield). $\mathrm{RATIO}_{i,t}$ is the fraction of consolidated net income of the parent CSOE of firm i to be mandated by the government during year t. α_i and α_t denote fixed effects for firms and years, respectively; and $X_{i,t}$ hosts a set

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[9]Our empirical sample excludes local SOEs. Although local governments have gradually begun to initiate profit-returning programs for their controlled SOEs since 2007, regulatory filings lack information on the identities of SOEs selected into their mandates and the corresponding profit-returning percentages. It is worth pointing out that using central CSOEs plausibly creates better identification compared with local SOEs. As China's institution has long been characterized with a Regionally Decentralized Authoritarian (RDA) regime (Xu (2011)), economic polies are regionally decentralized, subjecting local policies to a higher degree of endogeneity (e.g., being influenced by local economic conditions that may also impact local SOE performance).

TABLE 2

Summary Statistics of Empirical Variables

Table 2 presents summary statistics of variables used in our main empirical analyses. Variable definitions are outlined in Appendix B.

Variables	OBS.	Mean	Std. Dev.	P5	P25	Median	P75	P95
D/M	3077	0.008	0.012	0.000	0.000	0.003	0.012	0.035
RATIO	3077	0.052	0.054	0.000	0.000	0.050	0.100	0.150
IC_LOAN	3077	0.907	0.291	0.000	1.000	1.000	1.000	1.000
IC_LOAN_AMOUNT	3077	0.038	0.068	0.000	0.002	0.011	0.040	0.182
RPT	3077	0.753	0.431	0.000	1.000	1.000	1.000	1.000
RPT_AMOUNT	3077	0.120	0.285	0.000	0.000	0.013	0.091	0.588
SIZE	3077	22.235	1.522	20.189	21.169	21.954	23.038	25.341
ROA	3077	0.028	0.059	−0.072	0.009	0.027	0.052	0.119
LEV	3077	0.531	0.200	0.179	0.388	0.540	0.676	0.840
MB	3077	3.214	2.831	0.791	1.513	2.353	3.879	8.693
CASH	3077	0.158	0.121	0.023	0.073	0.128	0.206	0.433
RETURN	3077	0.350	0.869	−0.608	−0.247	0.074	0.685	2.142
FCF	3077	−0.002	0.101	−0.197	−0.032	0.013	0.050	0.135
STDROA	3077	0.028	0.038	0.002	0.007	0.015	0.033	0.100
BIG4	3077	0.138	0.345	0.000	0.000	0.000	0.000	1.000
OWNCON	3077	0.413	0.155	0.177	0.284	0.418	0.531	0.664
SEO	3077	0.057	0.232	0.000	0.000	0.000	0.000	1.000
SSSR	3077	0.706	0.456	0.000	0.000	1.000	1.000	1.000

of covariates. The estimate of δ_1 reveals the impact of the program on the listed CSOEs' economic outcome $y_{i,t}$.

C.   Summary Statistics

In Table 2, we report summary statistics for key variables used in our empirical analyses. We discuss several key characteristics. The dividend yield (D/M) has a sample average of 0.008 and a standard deviation of 0.012. The average profit-returning ratio (RATIO) for the sample listed CSOEs equals 5.2%. Measuring profitability, the return on assets (ROA) averages 2.8%. In terms of ownership structure (OWNCON), the largest shareholder on average owns 41.3% of our sample firms' shares, revealing a typical concentrated ownership structure. Appendix B presents detailed variable definitions.

IV.   Empirical Results

A.   The Program and Listed CSOEs' Dividends: Main Effect

1.   Baseline Regression

Our main hypothesis concerns the effect of the State Capital Operation Program on the payout policies of the listed CSOEs in which the parent CSOEs hold controlling yet partial stakes. To test this hypothesis, we build on equation (1) and employ the following regression model:

$$(2) \qquad D/M_{i,t} = \alpha_i + \alpha_t + \delta_1 RATIO_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}.$$

In equation (2), the dependent variable D/M measures firm i's dividend payout (i.e., dividend yield) of fiscal year t, computed as annual cash dividends divided by market capitalization at the end of the year. Notably, both the parent CSOE's

TABLE 3

Effect of the State Capital Operation Program on Listed CSOEs' Dividend Payout

Table 3 presents the effect of the State Capital Operation Program on listed CSOEs' dividend payout. D/M is defined as annual cash dividends divided by market capitalization at the end of the year. RATIO is the percentage of the parent CSOE's consolidated net income that is mandated by the government in the current year. Fixed effects for firms and years are included. t-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix B. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively, using 2-tailed student t-tests.

Variables	D/M 1	D/M 2
RATIO	−0.029*** (−2.95)	−0.022** (−2.37)
SIZE		−0.000 (−0.09)
ROA		0.048*** (8.37)
LEV		−0.001 (−0.30)
MB		−0.000 (−0.39)
CASH		0.009*** (2.79)
RETURN		−0.001*** (−4.18)
FCF		0.002* (1.68)
STDROA		−0.020*** (−3.79)
BIG4		0.002 (1.30)
OWNCON		0.004 (1.09)
SEO		0.002 (1.51)
SSSR		0.005*** (3.00)
Firm effects	Yes	Yes
Year effects	Yes	Yes
No. of obs.	3077	3077
Adj. R^2	0.486	0.542

profit-returning and the listed CSOE's dividend payout are based on the group (firm) performance of fiscal year t, and are executed (announced) in year $t + 1$, that is, after the fiscal year end of year t. We cluster standard errors by firms to account for residual correlations. The coefficient δ_1 captures the causal effect of the program on listed CSOEs' dividend payout. Following the prior literature (see, e.g., Gaspar, Massa, Matos, Patgiri, and Rehman (2013), Jacob and Michaely (2017), and Li et al. (2017)), we include proven determinants of firms' dividend payout ($X_{i,t}$) and present their definitions in Appendix B.

We report the empirical results in Table 3. In column 1, we estimate a parsimonious regression model, which includes our variable of interest RATIO and fixed effects for firms and years. The coefficient on RATIO equals −0.029 and is statistically significant ($t = -2.95$). Such a result suggests that a 5% increase (the most granular change in each reform) in RATIO is associated with a reduction in dividend yield (D/M) corresponding to 18% (=0.05 × 0.029/0.008) of the mean D/M. Column 2 reports the results controlling for the full host of covariates.

The coefficient on RATIO equals -0.022 ($t = -2.37$), which is slightly smaller in magnitude than that in column 1. Collectively, empirical results suggest that listed CSOEs significantly reduce cash dividends when parent CSOEs turn in a greater proportion of consolidated net income.

2.   The Offset Ratio of Retained Dividends to Mandated Earnings

To understand the economic meaning of the above estimate for a CSOE group, we draw upon the estimated coefficient on RATIO (-0.022, $t = -2.37$) in column 2 of Table 3 and construct the variable $OFFSET\_RATIO_{i,t}$ to measure the ratio of saved dividends to the group-level consolidated earnings, mandated by the government, for group i in year t, computed through equation (3) as follows:

$$(3) \quad OFFSET\_RATIO_{i,t}$$
$$= \frac{\sum_{j} 0.022 \times MV_{i,j,t} \times RATIO_{i,t} \times NON\_CONTROLLING\_OWNERSHIP_{i,j,t}}{EARNINGS_{i,t} \times RATIO_{i,t}},$$

where $MV_{i,j,t}$ is the market capitalization of firm j of group i at the end of year t. Therefore, $0.022 \times MV_{i,j,t} \times RATIO_{i,t}$ measures the amount of reduced dividends at the firm-level. $NON\_CONTROLLING\_OWNERSHIP_{i,j,t}$ is the fraction of shares held by noncontrolling investors of firm j of group i at the end of year t. The nominator aggregates, for group i in year t (with dividends announced and paid in year $t + 1$), its group affiliates' reduced dividends to noncontrolling shareholders.

The denominator $EARNINGS_{i,t} \times RATIO_{i,t}$ measures the resources of group i in year t, mandated by the government. As specified by the program, it equals a group's consolidated net income ($EARNINGS_{i,t}$), multiplied by the mandated profit-returning proportion ($RATIO_{i,t}$). An empirical challenge is that group-level information is not subject to mandatory disclosures. However, as parent CSOEs are required to disclose group-level financial statements when issuing public debt, we are able to obtain financial reports for a subsample of parent CSOEs from the *China Foreign Exchange Trading Center* (http://www.chinamoney.com.cn). We manually collect these reports and identify the consolidated earnings attributed to the parent firms of these groups ($EARNINGS_{i,t}$). $RATIO_{i,t}$ is the percentage of consolidated earnings, mandated by the government, for group i in year t. Note that, the variable $RATIO_{i,t}$ gets canceled out in equation (3).

Out of the 625 treated CSOE group-years ($RATIO_{i,t} > 0$), we are able to retrieve group-level data for 280, accounting for 45% of all the treated CSOE group-years. Using equation (3), we compute the OFFSET_RATIO for each group-year. We find a median value of 26.1% for OFFSET_RATIO, suggesting that the median group saves roughly a quarter of mandated resources through cutting listed CSOEs' dividends.[10]

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[10]The mean value of OFFSET_RATIO is higher, at 0.544, due to the right-skewed nature of the OFFSET_RATIO's distribution. Two reasons result in some group-years having high values of OFFSET_RATIO: i) groups with loss affiliates have low consolidated net income, ii) multiplying the regression estimate of -0.022 with market capitalizations of listed CSOEs gives us derived values of dividend reductions which may not be able to realize, for example, for firms previously paying low or zero dividends (thus having few dividends to cut).

Next, we analyze the distribution of OFFSET_RATIO against a CSOE group's weighted noncontrolling ownership. We consider noncontrolling ownership as it directly affects the fraction of dividends retained within, and paid to shareholders outside, a business group. We compute a group-level weighted noncontrolling ownership by weighing listed CSOEs with year-end market capitalizations. We divide parent CSOEs into three subsamples by the weighted NON_CONTROLLING_OWNERSHIP and compute each subsample's median OFFSET_RATIO. Consistent with the intuition in equation (3), the OFFSET_RATIO is higher for groups with higher noncontrolling ownership. It equals 16.53% for the subsample with the lowest-, 29.55% for the medium-, and 32.74% for the highest weighted average noncontrolling ownership.

3.   Dynamic Effects Around the Program Initiation

To ensure that the State Capital Operation Program provides an unexpected and persistent shock to listed CSOEs, we perform a test of dynamic effects in the spirit of Bertrand and Mullainathan (2003). To begin with, we modify equation (2) by replacing $RATIO_{i,t}$ with the indicator $PR_{i,t}$, which indexes periods during which a firm's controlling shareholder (i.e., the parent CSOE) is required to return a nonzero proportion of its profits to the state (i.e., $RATIO_{i,t} > 0$). We estimate equation (4.1) and report regression results in column 1 of Table 4. The coefficient on $PR_{i,t}$ is negative and significant (-0.002, $t = -2.63$), suggesting that treated

TABLE 4
Pre-Program Parallel Trend and Post-Program Dynamic Effects

Table 4 presents dynamic effects of the State Capital Operation Program on listed CSOEs' dividend payout. D/M is defined as annual cash dividends divided by market capitalization at the end of the year. PR is a dummy variable coded 1 if the controlling shareholder, that is, parent CSOE, is mandated to return profits to the state in the current year, and 0 otherwise. BEFORE[1] is a dummy variable, coded 1 in the year prior to the controlling shareholder being mandated to return profits to the state, and 0 otherwise. AFTER[0] (AFTER[1], AFTER[2]) is a dummy variable, coded 1 for the year (the year after, the second year after) the controlling shareholder is mandated to return profits to the state, and 0 otherwise. AFTER[3+] is a dummy variable, coded 1 for more than 2 years after the controlling shareholder is mandated to return profits to the state, and 0 otherwise. Control variables in Table 3 are also included but are unreported for brevity. Fixed effects for firms and years are included. t-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix B. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels respectively, using 2-tailed student t-tests.

Variables	D/M 1	D/M 2
PR	−0.002*** (−2.63)	
BEFORE[1]		−0.000 (−0.54)
AFTER[0]		−0.003*** (−3.24)
AFTER[1]		−0.002* (−1.72)
AFTER[2]		−0.004*** (−3.75)
AFTER[3+]		−0.004*** (−2.83)
Control variables	Yes	Yes
Firm effects	Yes	Yes
Year effects	Yes	Yes
No. of obs.	3077	3077
Adj. R^2	0.542	0.544

listed CSOEs reduce cash dividends upon receiving the treatment (i.e., begin turning in profits to the state).

$$(4.1) \qquad D/M_{i,t} = \alpha_i + \alpha_t + \delta_1 PR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}.$$

Building upon the baseline result, we estimate the dynamic effects of treated listed CSOEs around the treatment year. We decompose the variable PR into indicators for years surrounding the program. BEFORE[1] is coded 1 in the year prior to the parent CSOE's initiation of profit-returning to the state, and 0 otherwise. AFTER[0] (AFTER[1], AFTER[2]) is coded 1 for the year (the year after, the second year after) the parent CSOE's initiation of profit-returning to the state, and 0 otherwise. AFTER[3+] is coded 1 for more than 2 years after the parent CSOE's initiation of profit-returning to the state, and 0 otherwise. We estimate equation (4.2).

$$(4.2) \qquad D/M_{i,t} = \alpha_i + \alpha_t + \delta_1 BEFORE^1_{i,t} + \delta_2 AFTER^0_{i,t} + \delta_3 AFTER^1_{i,t}$$
$$+ \delta_4 AFTER^2_{i,t} + \delta_5 AFTER^{3+}_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}.$$

Column 2 of Table 4 reports the empirical results. We find that BEFORE[1] loads insignificantly (-0.000, $t = -0.54$).[11] Further, the coefficients on the variables indicating the post-program periods are consistently negative and statistically significant (-0.003, $t = -3.24$ for AFTER[0]; -0.002, $t = -1.72$ for AFTER[1]; -0.004, $t = -3.75$ for AFTER[2] and -0.004, $t = -2.83$ for AFTER[3+]). Collectively, empirical results validate the assumption in our identification strategy—that the effect of the program on listed CSOEs' dividend reductions is nonexisting pre-program and lasting post-program. Supplementary Figure IA.2 illustrates the dynamic effects graphically, with 95% confidence intervals displayed for coefficients of different years around the treatment year.

The recent advancement in econometrics literature cautions researchers against potential biases in multiple-period DiD estimates (Sun and Abraham (2020), Callaway and Sant'Anna (2021)). With heterogeneous and/or dynamic treatment effects, comparing newly treated firms with not-yet-treated firms may lead to estimates that are different from, or even opposite to, the underlying true estimate. To address this methodological concern, we follow Cenzig, Dube, Lindner, and Zipperer (2019) and perform stacked regressions; furthermore, we employ the approach suggested in Callaway and Sant'Anna (2021) and estimate the granular average treatment effects of treated firms (ATTs). We report empirical results in Supplementary Table IA.1. Our empirical inferences remain unchanged under these approaches.

B. Dividend Reductions to Maintain Group Resources

Thus far, we have contended that as the state mandates greater proportions of earnings from a parent CSOE, listed CSOEs (subsidiaries of the parent CSOE) reduce cash dividends to retain resources within the CSOE group. In this section, we perform corroborating analyses by incorporating the conditional role of minority ownership and by exploring the impact of the program on intragroup transactions.

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[11]The coefficient equals -0.000 as it is rounded to the third digit after the decimal point.

1. The Conditional Role of Minority Ownership

We begin with incorporating the potential role of minority ownership. We allow the listed CSOEs' dividend reductions to vary with the minority ownership. With higher minority ownership, dividend reductions of listed CSOEs can retain more resources within the CSOE group, thus presenting stronger incentives for *parent* CSOEs to cut *listed* CSOEs' dividends. Therefore, we examine whether listed CSOEs with higher minority ownership, compared with those with lower minority ownership, reduce dividends to a greater extent.

Empirically, we construct NON_CONTROLLING_OWNERSHIP as a listed CSOE's average noncontrolling ownership (i.e., 1 minus the percentage of shares held by the controlling shareholder) during the 2 years before the treatment year.[12] Panel A of Table 5 reports that NON_CONTROLLING_OWNERSHIP has a median of 60.3% (a mean of 60.0%) and a standard deviation of 14.9%.[13] We divide our sample into two subsamples: i) High NON_CONTROLLING_OWNERSHIP:

TABLE 5

Conditional Analyses of Minority Ownership

Table 5 presents the effect of the State Capital Operation Program on listed CSOEs' dividend payout, conditioning on the listed CSOE's pre-program noncontrolling ownership. We construct NON_CONTROLLING_OWNERSHIP as a firm's average noncontrolling ownership (i.e., 1 minus the percentage of shares held by the controlling shareholder) in the 2 years before the firm's treatment year (i.e., the listed CSOE's controlling shareholder is mandated to be returned to the state). Panel A reports summary statistics of NON_CONTROLLING_OWNERSHIP. Panel B reports subsample regression results. We split our sample into two subsamples: i) High NON_CONTROLLING_OWNERSHIP: Firm-years with noncontrolling ownership higher than or equal to the median; and ii) Low NON_CONTROLLING_OWNERSHIP: Firm-years with noncontrolling ownership lower than the median. The dependent variable D/M is defined as annual cash dividends divided by market capitalization at the end of the year. RATIO is the percentage of the parent CSOE's consolidated net income that is mandated by the government in the current year. Control variables in Table 3 are also included, but are unreported for brevity. Fixed effects for firms and years are included. *t*-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix B. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels respectively, using 2-tailed student *t*-tests.

Panel A. Statistics of NON_CONTROLLING_OWNERSHIP

Variable	Mean	Std.	P25	Median	P75
NON_CONTROLLING_OWNERSHIP	60.0%	14.9%	48.3%	60.3%	72.6%

Panel B. Subsample Regression Results

	NON_CONTROLLING_OWNERSHIP	
	High	Low
Variables	1	2
RATIO	−0.025**	−0.008
	(−2.33)	(−0.52)
Control variables	Yes	Yes
Firm effects	Yes	Yes
Year effects	Yes	Yes
No. of obs.	1428	1418
Adj. R^2	0.465	0.562
p-value of Chow test	0.343	

[12]Using pre-program non-controlling ownership mitigates the concern that outside shareholders may respond to this program, for example, through voting with their feet (later we show negative share price reactions around announcements of increases in profit-returning percentages). The average of 2 years' non-controlling ownership arguably forms a more reasonable prediction of a firm's long-term ownership structure.

[13]To identify the program initiation year and the pre-program non-controlling ownership, we exclude 231 firm-years wherein listed CSOEs only have post-program observations (e.g., with a post-program IPO year), resulting in the final sample of 2,846 (=3,077–231) firm-year observations in Table 5.

Firm-years with noncontrolling ownership higher than or equal to the median; and ii) Low NON_CONTROLLING_OWNERSHIP: Firm-years with noncontrolling ownership lower than the median. In both subsamples, we re-perform our main regression (equation (2)).

Table 5 Panel B reports the regression results. The coefficient on RATIO is negative and statistically significant in the "High NON_CONTROLLING_ OWNERSHIP" subsample (-0.025, $t = -2.33$); differently, it is insignificant in the "Low NON_CONTROLLING_OWNERSHIP" subsample (-0.008, $t = -0.52$). The difference in the two coefficients, albeit being statistically insignificant, is economically important. The dividend reduction effect in the former subsample is three times that in the latter subsample ($0.025/0.008$).[14] Empirical findings support the notion that listed CSOEs with higher noncontrolling ownership reduce more cash dividends post-program.

2.   Effect of the Program on Intragroup Transactions

While we contend that *parent* CSOEs reduce *listed* CSOEs' dividends to maintain group resources, an adverse liquidity shock to a parent firm may also induce increases in dividends from its controlled subsidiaries. For example, Gopalan et al. (2014) find that parent firms, upon receiving adverse liquidity shocks, increase subsidiaries' dividends to be redistributed through equity investment in other group affiliates.

We argue that the unique conditions in our setting lead to a different prediction. Due to weak institutions and low monitoring, the internal capital market of business groups in China sees two major forms of transactions that retain more resources for parent firms than the pro rata dividends—related party transactions and intercorporate loans. China's capital market has long been characterized with the relationship-based institutional feature (Li, Wong, and Yu (2020)). Non-arms-length transactions among related parties (e.g., group affiliates within a business group) incur limited costs due to weak institutions and low monitoring and are frequent for Chinese firms (Jian and Wong (2010), Jiang et al. (2010)). As such, we contend that, instead of increasing pro rata dividends, controlling shareholders retain more resources within the group through dividend cuts, later to be redistributed within the group.

Empirically, we predict greater intragroup transactions when the profit-returning percentage (RATIO) becomes higher. We identify a listed CSOE's intercorporate loans provided to the parent CSOE or to other group peers (i.e., with the listed CSOE as the creditor). Following Jian and Wong (2010), we measure a listed CSOE's total receivables from its controlling shareholder and affiliates using two alternative measures. IC_LOAN is an indicator that equals 1 if a listed CSOE has nonzero total receivables (including other receivables, loans, and other advanced payments) to its controlling shareholder and affiliates at the end of a fiscal year, and 0 otherwise. IC_LOAN_AMOUNT is defined as the amount of total receivables

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[14]When using the pre-program year's non-controlling ownership to form subsamples, we find similar results. In the "High NON_CONTROLLING_OWNERSHIP" subsample, the coefficient on RATIO is negative and statistically significant (-0.022, $t = -2.07$); again, it is insignificant in the "Low NON_CONTROLLING_OWNERSHIP" subsample (-0.013, $t = -0.82$). Economically, the former's magnitude is 69% higher than the latter.

from its controlling shareholder and affiliates, divided by total assets, both measured at the fiscal year end.

We then conduct OLS regressions by replacing D/M in equation (2) with our proxies for intercorporate loans and report regression results in Table 6. The coefficients on RATIO are positive and significant when the dependent variable is IC_LOAN (0.717, $t = 2.26$ in column 1) or IC_LOAN_AMOUNT (0.199, $t = 2.64$ in column 2). Using the results in column 2 to illustrate the economic significance, a 5% increase in RATIO corresponds to 0.01 increase in IC_LOAN_AMOUNT, accounting for 26.32% of the latter's mean (0.038). These results support the notion

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TABLE 6

Effect of the State Capital Operation Program on Intragroup Resource Reallocations

Table 6 presents the effect of the State Capital Operation Program on resource reallocation within business groups of listed CSOEs. We measure intragroup resource reallocation by i) intercorporate loans (IC_LOAN and IC_LOAN_AMOUNT), and ii) related party transactions (RPT and RPT_AMOUNT). IC_LOAN is an indicator that equals 1 if a listed CSOE has nonzero total receivables (including other receivables, loans, and other advanced payments) from its controlling shareholder and affiliates at the end of a fiscal year, and 0 otherwise; we also construct a continuous measure, IC_LOAN_AMOUNT, defined as the amount of total receivables from its controlling shareholder and affiliates, divided by total assets, both measured at the fiscal year end. RPT is an indicator that equals 1 if a listed CSOE has a nonzero amount of commercial sales and purchases with its controlling shareholder and affiliates during the year, and 0 otherwise; RPT_AMOUNT is the amount of a firm's commercial sales and purchases with its controlling shareholder and affiliates, divided by the firm's total assets during the year (Jian and Wong (2010), Liao et al. (2014)). RATIO is the percentage of the parent CSOE's consolidated net income that is mandated by the government in the current year. Control variables in Table 3 are also included but are unreported for brevity. Fixed effects for firms and years are included. t-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix B. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels respectively, using two-tailed student t-tests.

Variables	IC_LOAN 1	IC_LOAN_AMOUNT 2	RPT 3	RPT_AMOUNT 4
RATIO	0.717** (2.26)	0.199*** (2.64)	1.544*** (3.69)	0.519* (1.93)
SIZE	0.045** (2.31)	0.012** (2.27)	0.058** (2.48)	−0.034* (−1.93)
ROA	−0.161 (−1.17)	−0.027 (−0.70)	0.278 (1.58)	0.242* (1.86)
LEV	0.181** (2.28)	0.011 (0.52)	0.168* (1.84)	−0.001 (−0.01)
MB	−0.002 (−0.68)	0.000 (0.05)	−0.001 (−0.20)	0.005* (1.86)
CASH	−0.012 (−0.13)	−0.062** (−2.22)	−0.068 (−0.55)	−0.164*** (−2.68)
RETURN	0.010 (1.02)	−0.002 (−1.22)	0.006 (0.50)	−0.006 (−0.70)
FCF	0.062 (1.08)	−0.017 (−1.03)	0.032 (0.48)	−0.017 (−0.44)
STDROA	−0.441* (−1.92)	0.077 (1.34)	−0.359* (−1.69)	0.124 (0.61)
BIG4	−0.001 (−0.02)	−0.004 (−0.36)	−0.034 (−0.69)	0.054*** (2.81)
OWNCON	0.008 (0.07)	−0.027 (−0.98)	0.162 (1.15)	0.120 (1.21)
SEO	−0.017 (−0.44)	−0.005 (−1.00)	0.006 (0.16)	0.008 (0.38)
SSSR	−0.022 (−0.57)	−0.016 (−1.55)	0.059 (1.20)	−0.011 (−0.19)
Firm effects	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes
No. of obs.	3077	3077	3077	3077
Adj. R^2	0.307	0.473	0.543	0.578

that, upon increases in the proportion of parent CSOEs' earnings to be mandated by the government, intragroup transactions in the form of intercorporate loans significantly increased.

In addition, we investigate related party transactions between the listed CSOE and its group peers. These transactions constitute another important form of resource reallocation within business groups in China (Fisman and Wang (2010), Jian and Wong (2010), Jia, Shi, and Wang (2013), and Liao, Liu, and Wang (2014)). Specifically, we utilize granular data on commercial trades within a business group. Commercial trades constitute the dominant form of related party transactions, accounting for 33.1% in proceeds and 37.1% in frequency. The existing literature, such as Jian and Wong (2010) and Liao et al. (2014), also focus on commercial trades when analyzing Chinese firms' related party transactions.

Similar to our analyses of intercorporate loans, we construct two alternative measures for related party transactions involved by a listed CSOE. RPT is an indicator that equals 1 if a listed CSOE has nonzero amount of commercial sales and purchases with its controlling shareholder and affiliates during the year, and 0 otherwise; RPT_AMOUNT is the amount of a firm's commercial sales and purchases with its controlling shareholder and affiliates, divided by the firm's total assets during the year (Jian and Wong (2010), Liao et al. (2014)).

Using either PRT or RPT_AMOUNT as the dependent variable, we re-perform the OLS regression and report regression results in columns 3 and 4 of Table 6. We again find positive and significant coefficients on RATIO (1.544, $t = 3.69$ for RPT; 0.519, $t = 1.93$ for RPT_AMOUNT). Using results in column 4 to illustrate the economic significance, a 5% increase in RATIO is associated with 0.026 increase in RPT_AMOUNT, accounting for 21.63% of the mean RPT_AMOUNT (0.120).

Collectively, empirical results support the notion that, upon increases in parent CSOEs' profit-returning ratios, listed CSOEs engage in more intragroup transactions to redistribute resources within the CSOE group.

C.   Implications for Firm Performance and Firm Value

1.   The Program's Effects on Investment and Employment

Depleting liquidity of the parent CSOE should yield implications for nondividend policies of its controlled listed CSOEs as well. In this section, we analyze the implications of the program for listed CSOEs' capital investment and employment growth, and whether dividend reductions mitigate such implications. We focus on capital investment and employment growth for two reasons. First, the two indices are critical in the Chinese government's political evaluation of government officials (Gu et al. (2020)). As de facto government officials (Chen et al. (2018)), CSOE group managers have incentives to improve such indices. Second, both capital investment and employment growth (or avoiding layoff) require significant resources.

We measure firms' capital investment with INVEST, defined as the annual increase in fixed assets divided by total assets at the last fiscal year end. For employment growth, we construct EMPLOYEE_GROWTH, defined as the difference between the total numbers of employees at the current- and the last fiscal year end, divided by the total number of employees at the last fiscal year end. Control variables include Tobin's Q (TQ), cash holdings (CASH*)*, firm size (SIZE),

leverage (LEV), controlling shareholders' ownership (OWNCON), and the ownership by other top-10 blockholders (TOP2_10). We estimate the following difference-in-difference(s) regression model:

$$(5) \quad \text{INVEST}_{i,t}/\text{EMPLOYEE\_GROWTH}_{i,t} = \alpha_i + \alpha_t + \delta_1 \text{RATIO}_{i,t} + \gamma X_{i,t-1} + \varepsilon_{i,t}.$$

In equation (5), the dependent variable employs either INVEST or EMPLOYEE_GROWTH. We again include fixed effects for firms and years, and cluster standard errors by firms.

To analyze whether, through reducing cash dividends of listed CSOEs, corporate investment and employment are less likely to be impacted by the program, we construct an indicator HIGH_DIV_CUT which equals 1 if the group-level dividend reduction (for all listed firms within the group) is higher than or equal to the sample median, and 0 otherwise. We compute the difference between a firm's cash dividend in the current year and its average cash dividends during the 2 pre-program years, consistent with our earlier construct of noncontrolling ownership; we aggregate the changes in cash dividends of all listed CSOEs within a group, and deflate it by total market capitalizations of these firms at the fiscal year end before multiplying minus 1 (a higher value thus indicates greater dividend reduction). We estimate equation (6):

$$(6) \quad \text{INVEST}_{i,t}/\text{EMPLOYEE\_GROWTH}_{i,t} = \alpha_i + \alpha_t + \delta_1 \text{RATIO}_{i,t}$$
$$+\delta_2 \text{HIGH\_DIV\_CUT}_{i,t}$$
$$+\delta_3 \text{RATIO}_{i,t} \times \text{HIGH\_DIV\_CUT}_{i,t}$$
$$+\gamma X_{i,t-1} + \varepsilon_{i,t}.$$

We report regression results of estimating equations (5) and (6) in Table 7. Columns 1 and 2 employ INVEST as the dependent variable. The coefficient on RATIO is negative and of borderline insignificance (-0.229, $t = -1.57$) in column 1, that is, the unconditional effect of the program on investment. However, when we distinguish CSOE groups by the degree of dividend reductions of their listed CSOEs, we observe important differences between business groups saving more and those saving less, through cutting dividends. More specifically, column 2 reports a negative and significant coefficient on RATIO (-0.342, $t = -2.35$) and a positive and significant coefficient on HIGH_DIV_CUT $\times$ RATIO (0.426, $t = 2.24$). A linear combination of coefficients on RATIO and HIGH_DIV_CUT $\times$ RATIO suggests a positive but insignificant effect. Therefore, the program exerts a negative and significant effect on corporate investment in groups that save less resources through cutting dividends; differently, for groups saving more resources through cutting dividends, their listed CSOEs are less likely to decrease investment.

We then analyze the effect of the program on listed CSOEs' employment growth. Column 3 reports a negative and significant coefficient on RATIO (-1.596, $t = -2.09$), suggesting that the program results in lower employment growth for treated listed CSOEs. Further distinguishing CSOE groups by group-level dividend reductions, we find a negative and significant coefficient on RATIO (-1.965, $t = -2.57$) and a positive and significant coefficient on HIGH_DIV_CUT $\times$ RATIO

TABLE 7

Implications for Corporate Investment and Employment

Table 7 presents the effect of the State Capital Operation Program on resource reallocation within business groups of listed CSOEs. INVEST is defined as the annual increase in fixed assets divided by total assets at the last fiscal year end. EMPLOYEE_GROWTH is defined as the difference between the total number of employees at the current fiscal year end and that at the last fiscal year end, divided by the total number of employees at the last fiscal year end. RATIO is the percentage of the parent CSOE's consolidated net income that is mandated by the government in the current year. HIGH_DIV_CUT is an indicator that equals 1 if the group-level dividend reduction (for all listed firms within the group) is higher than or equal to the sample median, and 0 otherwise. Group-level dividend reduction is measured as the change in dividends of listed firms in the same CSOE business group, deflated by total market capitalizations of the business group's listed firms at the fiscal year end, multiplied by minus 1. The change in dividends for each firm is calculated as the difference between a firm's cash dividends in current year and the firm's average cash dividends during the 2 years before the firm's controlling shareholder is mandated to return profits to the state. Fixed effects for firms and years are included. t-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix B. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels respectively, using 2-tailed student t-tests.

	INVEST		EMPLOYEE_GROWTH	
Variables	1	2	3	4
RATIO	−0.229	−0.342**	−1.596**	−1.965**
	(−1.57)	(−2.35)	(−2.09)	(−2.57)
HIGH_DIV_CUT		−0.025		−0.133*
		(−1.51)		(−1.75)
HIGH_DIV_CUT × RATIO		0.426**		1.817**
		(2.24)		(2.08)
SIZE	−0.060***	−0.059***	−0.196***	−0.192***
	(−6.89)	(−6.81)	(−3.97)	(−3.97)
LEV	0.005	−0.000	0.000	−0.018
	(0.14)	(−0.01)	(0.00)	(−0.07)
TQ	0.009*	0.009**	0.051**	0.052**
	(1.96)	(2.00)	(2.30)	(2.35)
CASH	0.078*	0.081*	0.441*	0.450*
	(1.79)	(1.87)	(1.73)	(1.77)
OWNCON	0.307***	0.302***	1.225***	1.203***
	(4.13)	(4.13)	(2.66)	(2.66)
TOP2_10	0.293***	0.291***	0.962***	0.954***
	(4.28)	(4.26)	(2.95)	(2.93)
SSSR	0.028	0.028	0.033	0.035
	(1.22)	(1.26)	(0.30)	(0.33)
Firm effects	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes
No. of obs.	3066	3066	3053	3053
Adj. R^2	0.225	0.227	0.014	0.015
RATIO + HIGH_DIV_CUT × RATIO		0.085		−0.148
p-value		0.717		0.891

(1.817, $t = 2.08$). The linear combination of the two estimates is negative and insignificant. These results suggest that the negative effect of the program on listed CSOEs' employment growth is less pronounced when a CSOE group retains more resources by cutting its controlled listed CSOEs' dividends. Collectively, these findings point to CSOE managers' incentives to preserve liquidity within the CSOE groups to support employment and investment, both of which are important to their career outcomes (Gu et al. (2020)).[15]

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[15]Gu et al. (2020) categorize the central government's evaluation indices into three categories: i) "Veto" targets: social stability and birth rates, ii) "Hard" targets: economic growth, investment, and fiscal revenues, and iii) "Soft" targets: education and health, cultural activities, and pension coverage (p. 4705). From the perspective of CSOE group managers, corporate policies of listed CSOEs can directly affect the social stability, economic growth, investment, and fiscal revenue. We focus on

2.   Share Price Reactions to Parent CSOEs' Profit-Returning Ratio Increases

The post-program reductions in dividends and increases in intragroup resource transfers of listed CSOEs suggest that free cash flows of listed CSOEs are less likely to be distributed to their outside minority shareholders, plausibly the marginal investor determining share prices in China's stock market (Li, Liu, and Ni (2021)). As a result, we predict listed CSOEs' valuations to decrease around announcements of increases in parent CSOEs' profit-returning ratios.

To test this prediction, we examine market reactions around announcements of increases in profit-returning percentages. As detailed in our earlier discussion of the institutional background, there are four announcements associated with this program, each of which increases the profit-returning ratios for some parent CSOEs while leaving other parent CSOEs' ratios unchanged, creating desirable variations to facilitate the identification. For each announcement, we identify the earliest date on which the information arrived at the market: i) Dec. 11, 2007, ii) Dec. 29, 2010, iii) Jan. 13, 2012, and iv) May 6, 2014.

We construct abnormal stock returns during the event window around each announcement date and estimate the following OLS regression:

$$(7) \qquad \mathrm{CAR}_{i,t} = \delta_1 \Delta \mathrm{RATIO}_{i,t} + \delta_2 \mathrm{SIZE}_{i,t-1} + \delta_3 \mathrm{ROA}_{i,t-1} + \delta_4 \mathrm{LEV}_{i,t-1} \\ + \delta_5 \mathrm{MB}_{i,t-1} + \mathrm{Industry\ Effects} + \varepsilon_{i,t}.$$

In equation (7), CAR is the cumulative abnormal stock return computed using the Fama–French 5-factor model during our specified event window (Fama and French (2015)). We employ three alternative event windows: i) the 3-day $[-1, 1]$ window, ii) the 5-day $[-2, 2]$ window, and iii) the 7-day $[-3, 3]$ window. A shorter window has the advantage of preventing confounding factors while a longer window incorporates the possibilities of pre-announcement information leakage and post-announcement delayed reactions.

Our independent variable of interest ΔRATIO is the announced change in the parent CSOE's profit-returning ratio. We control for firm characteristics shown to affect stock returns, including firm size (SIZE), profitability (ROA), leverage (LEV), and market-to-book ratio (MB). Finally, we include industry fixed effects and compute t-statistics using standard errors clustered by firms.

Table 8 reports the regression results. In column 1 where we use CAR$[-1, 1]$ as the dependent variable, the coefficient on ΔRATIO is negative but insignificant $(-0.063, t = -1.36)$. Using cumulative returns measured during the longer event windows results in stronger effects $(-0.116, t = -1.86$ for CAR$[-2, 2]$; $-0.186,$ $t = -2.65$ for CAR$[-3, 3]$).[16] By and large, empirical results suggest significant value losses of listed CSOEs when their parent CSOEs are mandated to return higher proportions of earnings. Economically, a 5% increase in RATIO (the most

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corporate investment and employment as they create immediate and direct effect on the indices of investment, fiscal revenue, and social stability (China's dominant tax is value-added tax, accounting for roughly 40% of annual tax revenue, which directly generates tax revenues upon the investment made).

[16]Removing control variables results in similar inferences. The coefficient on ΔRATIO equals -0.070 ($t = -1.51$), -0.125 ($t = -2.00$) and -0.193 ($t = -2.75$) when CAR is measured during the $[-1, 1]$, $[-2, 2]$ and $[-3, 3]$ window, respectively.

TABLE 8

Market Reactions to Announcements of Profit-Returning Ratio Increases

Table 8 presents OLS regression results of listed CSOEs' stock price reactions around announcements of parent CSOEs' profit-returning ratio increases. We identify the 4 announcements on i) Dec. 11, 2007, ii) Dec. 29, 2010, iii) Jan. 13, 2012, and iv) May 6, 2014, respectively. For each announcement, CAR is the cumulative abnormal stock return computed through the Fama–French 5-factor model during our specified event window. We employ three alternative event windows: i) the 3-day $[-1, 1]$ window, ii) the 5-day $[-2, 2]$ window, and iii) the 7-day $[-3, 3]$ window. ΔRATIO is the change in the proportion of earnings to be returned to the state in the announcement. It equals 0 for listed CSOEs whose parent CSOEs do not experience ratio increases during an announcement. HIGH_MINORITY is an indicator that equals 1 if a firm's pre-announcement minority ownership is higher than or equal to the sample median, and 0 otherwise. HIGH_DM is an indicator that equals 1 if a firm's pre-announcement dividend level is greater than or equal to the sample median, and 0 otherwise. Control variables include common risk factors for stock returns, including firm size (SIZE), profitability (ROA), leverage (LEV), and market-to-book ratio (MB). Fixed effects for industries are included. t-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix B. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels respectively, using 2-tailed student t-tests.

Variables	CAR[−1, 1] 1	CAR[−2, 2] 2	CAR[−3, 3] 3	CAR[−1, 1] 4	CAR[−2, 2] 5	CAR[−3, 3] 6
ΔRATIO	−0.063 (−1.36)	−0.116* (−1.86)	−0.186*** (−2.65)	−0.233** (−2.57)	−0.241* (−1.79)	−0.424*** (−2.76)
HIGH_MINORITY × HIGH_DM × ΔRATIO				−0.329** (−2.20)	−0.345* (−1.72)	−0.314 (−1.36)
HIGH_MINORITY × ΔRATIO				0.189 (1.61)	0.195 (1.25)	0.222 (1.21)
HIGH_MINORITY × HIGH_DM				0.012** (2.29)	0.012* (1.78)	0.010 (1.29)
HIGH_DM × ΔRATIO				0.285** (2.52)	0.202 (1.32)	0.376** (2.10)
HIGH_MINORITY				−0.009** (−2.37)	−0.010* (−1.91)	−0.006 (−1.06)
HIGH_DM				−0.008** (−2.32)	−0.009* (−1.73)	−0.011** (−1.97)
SIZE	0.001 (1.25)	0.001 (0.99)	0.001 (0.61)	0.001 (0.82)	0.001 (0.80)	0.001 (0.57)
ROA	−0.022 (−0.88)	−0.043 (−1.45)	−0.058* (−1.71)	−0.024 (−0.94)	−0.038 (−1.25)	−0.056 (−1.57)
LEV	0.007 (0.90)	0.005 (0.55)	0.001 (0.12)	0.007 (1.01)	0.006 (0.63)	0.002 (0.16)
MB	−0.000 (−0.29)	−0.000 (−0.38)	−0.001 (−0.64)	−0.000 (−0.38)	−0.000 (−0.51)	−0.001 (−0.78)
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes
Event effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	1104	1104	1104	1104	1104	1104
Adj. R^2	0.102	0.064	0.083	0.105	0.064	0.083

granular change during all announcements) corresponds to listed CSOEs' value losses of 0.32%–0.93%, dependent on the event window chosen.

We further consider the role of minority ownership. Earlier, we have shown that treated firms with higher minority ownership cut more dividends after the program, compared with those with lower minority ownership. Extending this result to our analyses of firm value, we conjecture that the loss of market value associated with an increase in the profit-returning ratio should be stronger for firms with higher minority ownership as investors expect greater dividend reductions. Such a line of reasoning implies a joint consideration of the level of minority ownership and the level of pre-announcement dividends.

We construct an indicator HIGH_MINORITY which equals 1 if a firm's pre-announcement noncontrolling ownership is higher than or equal to the sample median, and 0 otherwise. In addition, we construct an indicator HIGH_DM which

equals 1 if a firm's pre-announcement dividend level is greater than or equal to the sample median, and 0 otherwise. We estimate the following regression model:

$$
\begin{aligned}
(8) \quad CAR_{i,t} = {} & \delta_1 \Delta RATIO_{i,t} \times HIGH\_MINORITY_{i,t-1} \times HIGH\_DM_{i,t-1} \\
& + \delta_2 \Delta RATIO_{i,t} \times HIGH\_MINORITY_{i,t-1} + \delta_3 \Delta RATIO_{i,t} \times HIGH\_DM_{i,t-1} \\
& + \delta_4 HIGH\_MINORITY_{i,t-1} \times HIGH\_DM_{i,t-1} + \delta_5 \Delta RATIO_{i,t} \\
& + \delta_6 HIGH\_DM_{i,t-1} + \delta_7 HIGH\_MINORITY + \delta_8 SIZE_{i,t-1} + \delta_9 ROA_{i,t-1} \\
& + \delta_{10} LEV_{i,t-1} + \delta_{11} MB_{i,t-1} + \text{Industry Effects} + \varepsilon_{i,t}.
\end{aligned}
$$

Our variable of interest is the 3-way interaction term. If higher minority ownership results in greater market value losses through the dividend-reduction channel, we expect the coefficient on $\Delta RATIO \times HIGH\_MINORITY \times HIGH\_DM$ to be negative. To allow the model to be fully interacted, we also control for the 2-way interactions among $\Delta RATIO$, HIGH_MINORITY, and HIGH_DM and the separate controls of these variables.

Columns 4–6 in Table 8 report the regression results. We find that the coefficients on $\Delta RATIO \times HIGH\_MINORITY \times HIGH\_DM$ are consistently negative, and statistically significant except for column 6. The economic magnitude of the interactional effect is sizable. Within firms paying higher pre-program dividends, again considering a 5% increase in RATIO, firms with higher minority ownership experience an additional -1.73% to -1.57% abnormal stock return relative to those with lower minority ownership, depending on the window chosen.

D.   Additional Analyses and Robustness

1.   Group Managers' Incentives

The SASAC conducts both annual and triennial evaluations of parent CSOE managers, and the outcome of the latter evaluation significantly affects a manager's career outcome, that is, promotion, demotion, or remaining *status quo* (Deng et al. (2015)). We argue that the incentive to obtain political capital is greater (weaker) when a treated group's manager serves the evaluation year (nonevaluation years), reflected by greater dividend reductions for listed CSOEs.

Empirically, we estimate equation (2) separately for the following two subsamples: i) Treated firm-years with group managers serving their evaluation year + nontreated firm-years; and ii) treated firm-years with group managers not serving their evaluation year + nontreated firm-years. Regression results in Panel A of Supplementary Table IA.2 suggest that the coefficient on RATIO for evaluation-year managers (-0.043, $t = -2.86$) is approximately two times the magnitude of that for nonevaluation-year managers (-0.022, $t = -2.35$). Employing equation (3) to compute the offset ratios, we find that evaluation-year managers recover 44.68% of mandated group resources while their nonevaluation-year counterparts recover 27.85%.

2.   Alternative Measures of Dividend Payout

Our main analyses employ dividend yield to examine firms' payout policies, consistent with the related literature on firm's financial flexibility (e.g., Bonaimé

et al. (2014)), payout policies of business group affiliates (e.g., Masulis, Pham, and Zein (2011)), and payout policies of listed firms in China (e.g., Li et al. (2017)).

In this section, we construct two alternative measures of dividend payout. D/E measures a firm's dividend payout ratio, defined as annual cash dividends divided by net income during the current year (excluding loss firms); D/S measures a firm's dividend-to-sales ratio, defined as annual cash dividends divided by the sales revenue during the current year. Although these two measures do not directly measure dividends from the shareholders' perspective, they are less affected by nonfundamental factors such as investment sentiments. Using these alternative measures to replace the D/M, we find consistent evidence of dividend reductions of listed CSOEs upon increases in parent CSOEs' profit returning ratios (Panel B of Supplementary Table IA.2).

3.   Fiscal Deficit and the Program's Dividend-Reduction Effect

The initiation of the State Capital Operation Program serves to enhance China's fiscal resources. When the central government faces greater fiscal pressure, the enforcement of the State Capital Operation Program should be more stringent and the adverse shock to the CSOE group becomes greater. Building on this discussion, we predict greater reductions in dividend payouts of treated listed CSOEs during periods of greater fiscal deficit of the central government.

Empirically, we construct the variable DEFICIT, defined as the difference between the central government's annual fiscal expenditure and its annual fiscal income, deflated by the annual fiscal income. We obtain data on fiscal revenue and fiscal expenditures of the central government from the China Statistical Yearbook, maintained by the National Bureau of Statistics. A higher value of DEFICIT suggests greater fiscal pressure faced by the central government. Adding the interaction DEFICIT $\times$ RATIO into our main regression model, we re-estimate the OLS regression and report results in Panel C of Supplementary Table IA.2. The negative and significant coefficient on the interaction term (-0.468, $t = -2.53$) suggests that listed CSOEs are more likely to reduce dividend payouts in years when the central government has greater fiscal pressure.

4.   Subsidiaries' Dividends and Parent CSOEs' Consolidated Net Income

Is it possible that the parent CSOE reduces subsidiaries' (i.e., listed CSOEs) dividend payouts to achieve a lower level of consolidated net income? This concern arises because mandating profit-returning imposes a quasi-tax, potentially inducing the parent CSOE to reduce its tax basis. We discuss accounting standards and perform additional analyses to mitigate this concern.

Under China's Accounting Standards No. 2, "Long-Term Equity Investment," a subsidiary's dividend affects its parent firm's consolidated net income only when the latter does not exert significant influence over the former. A rule-of-thumb in determining significant influence is whether parent firms' ultimate voting rights are no lower than 20%. We follow La Porta, Lopez-de-Silanes, and Shleifer (1999) and construct controlling shareholders' ultimate voting rights for listed CSOEs. In our sample, the ultimate voting rights have a mean of 42.5% and a median of 44.1%; furthermore, only 7.05% (204 firm-years) of the treated observations do not meet the 20% threshold. Excluding observations not meeting this threshold, we

re-perform our main regression on listed CSOEs' dividends (equation (2)). Panel D of Supplementary Table IA.2 presents results that are statistically and economically similar to our earlier findings.

5.   The Conditional Role of CSOE Groups' Financial Constraints

Throughout this study, we have argued that as the state mandates resources from the parent CSOE, listed CSOEs reduce dividends to retain more internal capital within the group. Such a notion implies a key cross-sectional prediction— the effect should be greater for CSOE groups that are more financially con-strained. In this section, we empirically test this prediction to further corroborate our thesis. We follow Hadlock and Pierce (2010) and compute SA_INDEX for each CSOE group-year. For each listed CSOE, we calculate SA_INDEX as $-0.737 \times \text{SIZE} + 0.043 \times \text{SIZE}^2 - 0.040 \times \text{AGE}$. SIZE is the natural logarithm of inflation-adjusted book assets (Million RMB); AGE is the number of years since a firm's listing date. We then construct the group-level SA_INDEX by computing the size-weighted average (weighed by each listed CSOE's year-end market capitalization) of all listed CSOEs' SA_INDEX values within the group. A higher value of SA_INDEX suggests greater financial constraint (or lower financial flexibility).

We form two subsamples based on group-level financial flexibility. The "Low (High) Financial Flexibility" subsample includes listed CSOEs of group-level SA_INDEX greater than or equal to (lower than) the sample median. We perform our main regression of the impact of RATIO on D/M in both subsamples. Panel E of Supplementary Table IA.2 shows that the effect of parent CSOEs' profit-returning percentage on listed CSOEs' dividends is negative and significant in the "Low Financial Flexibility" subsample (-0.042, $t = -3.10$), yet positive and insignificant for the "High Financial Flexibility" subsample (0.014, $t = 0.97$). The differential results driven by group-level financial flexibility further corroborate our thesis that adverse liquidity shocks to parent CSOEs reduce pro rata cash dividends paid to outside shareholders.

V.   Conclusion

In this study, we examine the effect of the state controlling shareholders' incentives on state-owned enterprises' payout policies. We exploit China's State Capital Operation Program in 2007 which initiated a new fiscal fund to cover the expenditures of a wide scope of activities consistent with the state's objectives. The program introduced a series of mandates requiring *parent* CSOEs, that is, CSOEs that are fully and directly controlled by the state, to contribute a proportion of their consolidated net income to the fund.

We show that as *parent* CSOEs' profit-returning ratios increase, they reduce cash dividends of *listed* CSOEs in which they retain controlling yet partial stakes. Such a result is consistent with the hypothesis that experiencing mandated resource reductions, the parent CSOEs will reduce the listed CSOEs' pro rata dividends to maintain the pre-program levels of group resources. Two additional pieces of evidence corroborate this notion. First, the dividend reduction effect is concentrated in listed CSOEs with higher noncontrolling ownership and is insignificant in listed

CSOEs with lower noncontrolling ownership. Second, the dividend reductions of listed CSOEs are concurrent with increases in intercorporate loans and related-party transactions within their inhabiting business groups, that is, the two primary forms of intragroup resource reallocations.

We argue that the dividend cut can be traced to *parent* CSOE managers' (i.e., group managers) career concerns. We explore the implications of the program for treated firms' investment and employment—two indices that are critical to government officials' political evaluations and that require significant economic resources. We find that when CSOE groups cut less dividends at the group-level, the program has a significant, negative effect on listed CSOEs' capital expenditures and employment growth; importantly, both effects are weakened when the group-level dividend reduction is greater.

Consistent with the prediction in DeAngelo et al. (2008), our study shows that state controlling shareholders' incentives result in sub-optimal payout policies and hurt minority shareholders' interests. This theoretical notion is supported by *listed* CSOEs' negative share price reactions to announcements of increases in *parent* CSOEs' profit-returning ratios. Our focus on state controlling shareholders, however, presents a caveat in result interpretation. Despite the adverse consequences imposed on minority shareholders, the program and the CSOE business groups may enhance social welfare, for example, through expenditures of this fiscal fund. As Khanna and Yafeh (2007) contend, if business groups with government liaisons can facilitate tax collection and support fiscal policies, then their existence may be socially desirable. The State Capital Operation Program is designed to leverage the resources in government-controlled business groups with an objective to support government policies. Therefore, policymakers face the tradeoff of the costs borne by minority shareholders and the benefits of potentially improved social welfare.

Appendix A

TABLE A1
The State Capital Operation Program

Appendix A summarizes and presents the profit-returning percentages of parent CSOEs, by categories and subperiods. The first five groups include parent CSOEs selected in the initial mandate in 2007. Parent CSOEs in group 6 and group 7 are added to the program in 2011 and 2012, respectively.

	Categories of CSOEs	Stage 1 *Pre*–2007	Stage 2 2007–2010	Stage 3 2011	Stage 4 2012–2013	Stage 5 2014
1	China Tobacco Corporation	0%	10%	15%	20%	25%
2	CSOEs in monopolistic industries, including Petroleum, Mining, Tobacco, Telecommunication, and Electrical power	0%	10%	15%	15%	20%
3	CSOEs in generally competitive industries, including Transportation, Steel, Trade and commerce, and Construction	0%	5%	10%	10%	15%
4	CSOEs in military-related industries and those affiliated with scientific research institutions	0%	0%	5%	5%	10%
5	China Grain Reserve Corporation, and China Cotton Reserve Corporation	0%	0%	0%	0%	0%
6	CSOEs affiliated with the Ministry of Education, Ministry of Culture, Ministry of Agriculture, and the State Administration of Radio, Film, and Television	0%	0%	5%	5%	10%
7	CSOEs affiliated with the Ministry of Health, Ministry of Information and Technology, and the State Administration of Sports	0%	0%	0%	5%	10%

Appendix B. Variable Definitions

Outcome Variables: Dividend payout, resource reallocation, investment, employment, and valuation

D/M: Annual cash dividends divided by market capitalization at the end of the year

D/E: Annual cash dividends divided by earnings during the current year for firms with positive earnings. D/E equals 0 for firms with zero cash dividends and nonpositive earnings during the current year

D/S: Annual cash dividends divided by sales during the current year

IC_LOAN: An indicator that equals 1 if a listed CSOE has nonzero total receivables (including other receivables, loans, and other advanced payment) to its controlling shareholder and affiliates at the end of a fiscal year, and 0 otherwise

IC_LOAN_AMOUNT: The amount of total receivables from its controlling shareholder and affiliates, divided by total assets, both measured at the fiscal year end

RPT: An indicator that equals 1 if a listed CSOE has nonzero amount of commercial sales and purchases with its controlling shareholder and affiliates during the year, and 0 otherwise

RPT_AMOUNT: The amount of a firm's commercial sales and purchases with its controlling shareholder and affiliates, divided by the firm's total assets during the year

INVEST: The annual increase in fixed assets divided by total assets at the last fiscal year end

EMPLOYEE_GROWTH: The difference between the total number of employees at the current fiscal year end and that at the last fiscal year end, divided by the total number of employees at the last fiscal year end

CAR: The cumulative abnormal stock return computed through the Fama–French 5-factor model during our specified event window. We employ three alternative event windows: i) the 3-day $[-1, 1]$ window, ii) the 5-day $[-2, 2]$ window, and iii) the 7-day $[-3, 3]$ window

Program Related Variables

RATIO: The percentage of a firm's controlling shareholder's profits mandated to be returned to the state in the current year

PR: A dummy variable that equals 1 if the firm's controlling shareholder is mandated to return profits to the state in the year, and 0 otherwise

BEFORE[1]: A dummy variable that equals 1 in the year prior to the firm's controlling shareholder being mandated to return profits, and 0 otherwise

AFTER[0]: A dummy variable that equals 1 in the year the firm's controlling shareholder being mandated to return profits, and 0 otherwise

AFTER[1]: A dummy variable that equals 1 for the first year after the firm's controlling shareholder being mandated to return profits, and 0 otherwise

AFTER^2: A dummy variable that equals 1 for the second year after the firm's controlling shareholder being mandated to return profits, and 0 otherwise

AFTER^{3+}: A dummy variable that equals 1 for more than 2 years after the firm's controlling shareholder being mandated to return profits, and 0 otherwise

Control Variables

SIZE: The natural logarithm of total assets at the end of the year

ROA: Return on assets, defined as earnings divided by total assets at the end of the year

LEV: Financial leverage, defined as total liabilities divided by total assets at the end of the year

MB: Market to book ratio, defined as market value of equity divided by book value of equity at the end of the year

CASH: Cash assets divided by total assets at the end of the year

RETURN: The stock return during the year

FCF: Free cash flow divided by total assets at the end of the year. Free cash flow is defined as the sum of operating income before interest expense and noncash payments (e.g., depreciation, amortization), minus capital expenditure

STDROA: Standard deviation of ROAs in the previous 3 years

BIG4: A dummy variable that equals 1 if the firm is audited by an international Big 4 auditor, and 0 otherwise

OWNCON: Ownership concentration, defined as the percentage of shares held by the largest shareholder at the end of the year

SEO: A dummy variable that equals 1 if the firm has conducted public seasoned equity issuances or rights offerings in the preceding 3 years, and 0 otherwise

SSSR: A dummy variable that equals 1 if the firm has completed the split-share structure reform by the year, and 0 otherwise

NON_CONTROLLING_OWNERSHIP: One minus the percentage of shares held by the controlling shareholder before the treatment year

TQ: Tobin's Q, defined as (market value of equity + book value of long-term debt + book value of inventories + book value of current liabilities - book value of current assets) / total assets, all measured at the end of the year (Bai, Liu, Lu, Song, and Zhang (2004))

TOP2_10: The percentage of shares held by the top 10 blockholders, other than the controlling shareholder, at the end of the year

HIGH_DIV_CUT: An indicator that equals 1 if the group-level dividend reduction (for all listed firms within the group) is higher than or equal to the sample median, and 0 otherwise

HIGH_MINORITY: An indicator that equals 1 if a firm's pre-announcement minority ownership is higher than or equal to the sample median, and 0 otherwise

HIGH_DM: An indicator that equals 1 if a firm's pre-announcement dividend level is greater than or equal to the sample median, and 0 otherwise

Supplementary Material

To view supplementary material for this article, please visit http://doi.org/10.1017/S0022109022001132.

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