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State Ownership and Accounting Quality: Evidence from State-Owned Enterprises in China

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Abstract: The inherent problems of state-owned enterprises (SOEs), such as the lack of external monitoring, may harm their accounting quality. However, the results from prior research are not consistent. Therefore, this study investigates the effect of state ownership of SOEs on accounting quality, measured by earnings management. Using the samples of listed SOEs in the A-share market in China from 2009 to 2017, the results indicate that there is a significant and positive relationship between state ownership and earnings management. Furthermore, the results show that higher competition within the industry can effectively inhibit the negative effect of state ownership on accounting quality. Interestingly, the positive relationship between state ownership and earnings management has weakened in recent years, suggesting that the recent mixed-ownership reform of SOEs is effectively working. Collectively, current study extends prior research by focusing on SOEs in a planned economy and by combining the mixed-ownership reform with earnings management. Consequently, this study provides practical implication to regulatory bodies by showing that state ownership plays an important role in the accounting quality of SOEs.

Keywords: state ownership; state-owned enterprises (SOEs); accounting quality; earnings management; industry competition; mixed-ownership reform

1. Introduction

State-owned enterprises (hereafter, SOEs) play a significant role in the global economy. From an international perspective, SOEs contribute to more than 10% of the global domestic products [1,2]. The proportion is even greater in developing countries. For instance, SOEs' performance explains a large portion of BRICs countries' overall GDP. In particular, it accounts for more than 80% of Russia's GDP and 50% of both India and Brazil's GDP [2]. It is particularly surprising that in China, more than 90% of GDP is attributed to SOEs [2].

Since the founding of the country, the success of SOEs has influenced the development of China's national economy. It can be seen that the pressure of the Chinese government on the economic development of SOEs has played a crucial role in the development of its economy [3]. To ensure the stability and controllability of economic development, it is difficult for non-state-owned shares to participate in SOE operations and management. At the same time, because state ownership has the support of the central and local government departments or their subordinate institutions, the development of SOEs is enriched by the government's massive subsidies and support. However, the lack of innovation in management and decline in market competition have led to the stagnant growth of SOEs, which negatively affects the sustainability of the national economy of China.

Therefore, the Chinese government began to actively reform the management system and enterprise innovation of SOEs. The government has continuously promoted the reform of the mixed-ownership of SOEs, encouraging non-state-owned and foreign capital to participate in the operation and management of SOEs. For instance, in 2013, the 18th Central Committee of the Chinese Communist Party guided mixed-ownership reform as the primary goal of the reform of SOEs. This project allowed for non-state capital participation,

making full use of the decisive role of the market in the allocation of resources, thereby actively developing the governance structure of SOEs. The reform presents a view that SOEs with non-state-ownership have more incentive to improve the internal management mechanism and promote competitiveness of the market.

In academic research, previous studies document mixed results of state ownership on SOEs' financial reporting. For instance, one stream of research suggests that the accounting quality of SOEs is generally worse than that of other privately owned enterprises [4–6]. These studies document a positive relationship between an increase in state ownership and the level of earnings management. In contrast, another stream of research suggests that SOEs controlled by state ownership are less engaged in earnings management and invest more in innovative projects [7]. Collectively, it seems that there are both positive and negative views regarding the role of state ownership in the accounting quality of SOEs. Moreover, most results are from the developed market, which may differ under a planned economy. Furthermore, the lack of prior research is that few studies directly test the consequences of ownership reform and governmental effort on the accounting quality of SOEs. Therefore, this study is an extension of prior research by its investigation of the effect of mixed-ownership reform in China on the relationship between state ownership of SOEs and their accounting quality.

Through using the samples of listed SOEs in the A-share market in China from 2009 to 2017 and using earnings management as a proxy for accounting quality [8], we first find that there is a positive relationship between the proportion of state ownership and earnings management. This can be interpreted as the SOEs' problem being severe due to the lack of sustainable monitoring by shareholders. As earnings management is a common way to maximize the private wealth and SOEs have more incentives to move their earnings upward as they have fewer outside monitoring mechanisms, it is plausible that the degree of earnings management is more prevalent in SOEs. Second, the results show that higher competition within the industry can effectively inhibit the negative effects of state ownership on accounting quality. In other words, widespread control failures such as low operational efficiency and poor service quality of SOEs within monopolistic industries strengthen the positive relationship between state ownership and earnings management. Third, recent improvements in corporate accounting information by allowing non-stated ownership to participate in SOEs' managerial decisions may alleviate the problems in SOEs. Similar to this prediction, our results show that the positive relationship between state ownership and earnings management has weakened in recent years, suggesting that mixed-ownership reform is effectively working.

This study contributes to the literature in the following ways. First, the positive relationship between state ownership and earnings management in SOEs suggests weak monitoring by external governance mechanisms. This finding is consistent with those of previous studies using developed markets. The current study extends prior research by focusing on SOEs in a planned economy. Second, it provides a practical contribution to mixed-ownership reform in China. In order to improve the financial reporting environment of SOEs, the Chinese government has attempted to improve SOEs' ownership structure through continuous reforms, which has been an important research topic in recent years [3,9]. Nevertheless, few studies have reported the effect of reform on accounting quality. Accordingly, the findings of this study may provide an initial empirical evidence that explains the effectiveness and sustainability of the reform suggested by the 18th Central Committee of the Chinese Communist Party. Third, this study theoretically extends prior research by combining the reform of SOEs and industry competition. Specifically, the study finds that the mixed-ownership reform of SOEs in competitive industries can alleviate the agency problem. Thus, this study suggests that industry competition is an important external monitoring mechanism.

The remainder of this paper starts with Section 2, in which the background of SOE reforms, literature review, and hypotheses development are presented. Then, Section 3

presents the empirical methodology; Section 4 presents our empirical results; and Section 5 describes the discussion. Finally, Section 6 concludes the study.

2. Background of SOE Reforms, Literature Review, and Hypotheses Development

2.1. Background of SOE Reforms in China

In the historical process of China's economic development, which is affected by the planned economy system, SOEs have occupied a vital position in every area. It can be seen that SOEs are the product of a planned economy and have been undertaking all the pressure from China's economic development, playing a crucial role in the socialist economic development in China [3]. To protect the stability and controllability of SOEs, it was difficult for non-state-owned capital to participate in their management. In this regard, there are two opposing views regarding the higher level of state ownership of SOEs.

From one perspective, this deficiency of SOEs has led to severe related transactions and tunneling problems. Reference [10] find that cross-shareholdings and pyramidal-holding structures are very common in the Asian market, which in turn leads to controlling shareholders gaining significant control over a small capital expenditure, exacerbating the tunneling effect. In the same manner, the problem caused by the dominant share of government leads SOEs not to maximize enterprise value as the ultimate goal of the organization. For instance, Ref. [11] show that the connected transactions between Chinese listed companies and state-owned parent companies damage the value of listed companies and the average value loss accounts for 34% of the value of connected transactions. The related transactions include the high-priced buying of the parent company's inferior assets and providing a guarantee for the parent company with a high cash dividend. The political goals of state-owned shareholders make their intervention in the allocation of corporate resources deviate from the maximization of profits and damage the performance of enterprises [12]. Thus, the conservative business approach and lack of innovation of SOEs led to a decline in competitiveness in the markets, a slowdown in the promotion of economic growth, and a loss of vitality. Moreover, studies suggest that the accounting quality of SOEs is generally worse than that of other privately owned enterprises [4–6].

Conversely, because state-owned shareholders have the support of the central and local government departments, or their subordinate relevant state-owned assets supervision and administration institution, the development of SOEs enjoys the government's massive subsidies and support. By being deeply involved in the management of SOEs and supporting their operational decisions, the government enjoys benefits from their growth, such as tax payments [13]. Thus, the relationship between SOEs and the government is difficult to separate. Moreover, Ref. [7] suggest that SOEs controlled by state ownership invest in more innovative projects and are less engaged in earnings management. Therefore, to summarize, there are both positive and negative views on the accounting quality of SOEs.

To enhance the internal governance structure of SOEs, the Chinese government has continued to implement various regulations to reform them. First, considering SOEs have many drawbacks in the original planned economic system, after the reform and opening-up, the Chinese government had attached the importance of promoting the structural transformation of the economic system. This was done in order to enable SOEs to better serve the development of China's economic construction, recovering the positive promotion of the economy and the vitality of the pillar industry. In addition, the Chinese government has accelerated the construction of a modern enterprise system for SOEs, promoted a series of company systems and shareholding system reforms, and established an enterprise system with clear property rights and individual rights and responsibilities. In 2003, the State Council of China established the State-owned Assets Supervision and Administration Commission to manage the rational allocation of resources for state-owned assets, ensure the security of state-owned assets, and promote the development of the state-owned economy.

Second, accounting quality is an essential indicator for evaluating accounting information quality. Financial report disclosure is a critical means of providing company

performance and management information to external investors [14,15]. The China Securities Regulatory Commission implemented requirements for the quality of accounting information. In 2007, it promulgated and implemented the Administrative Measures for Information Disclosure of Listed Company, requiring improvement in the quality of accounting information of listed companies and guaranteeing the stable operation of SOEs.

Third, the senior executives of SOEs are appointed by the national government and are loyal performers of the government's political goals [16]. Meanwhile, the motivation for political promotion also forces the senior executives of SOEs to attract more attention from their superiors by expanding the scale of enterprises and enhancing their competitiveness [17]. However, because of the political background and imperfect incentive system, senior executives of SOEs used their political and strategic superiority to enhance their compensation, causing massive losses of state-owned assets. In the absence of an incentive mechanism to satisfy personal self-interest, executives in SOEs take advantage of the information that other shareholders cannot obtain from the internal system. To prevent this, in 2009, the Chinese government promulgated regulations stipulating the salaries of senior executives of SOEs. The guidance emphasized that the executives' salary should not exceed 30 times that of the average salary of employees, thus limiting the salary incentive of executives.

Lastly, but mostly related to our study, in 2013, the 18th Central Committee of the Chinese Communist Party promulgated policies to support a large number of private capital developments and the introduction of foreign capital. In particular, the Decision of the Central Committee of the Communist Party of China published a policy document named Decision on Major Issues Concerning Comprehensively Deepening Reforms that states that the reform of mixed-ownership is the first goal of SOE reform. By doing so, the Chinese government expects an improvement in the accounting quality of SOEs. In particular, it allows non-state-owned capital to participate in order to make full use of the decisive role of the market in resource allocation, actively developing a mixed-ownership economy. The sixth point of the document clearly states, "Actively develops a diversified ownership economy. Diversified ownership integrated by state, collective, and private capital is the prime method for materializing the basic economic system, helping improve functions, increasing value, and promoting the competitiveness of state capital. Allow more SOEs and other ownership enterprises develop into mixed-ownership enterprises. Non-state shares will be allowed in state capital investment projects."

Consistent with the recent reform, previous studies on this reform emphasize that mixed-ownership is the dominant organizational and implemental form of establishing a modern SOE system [18,19]. For instance, Ref. [19] view that the introduction of non-state-owned capital can solve the problem of combining state-owned capital with the market economy. It can realize the transformation of governance structure from administrative governance to economic governance, which can promote the separation of government and enterprise.

2.2. Literature Review and Hypotheses Development

2.2.1. State Ownership and Accounting Quality

High-quality accounting information depicts a faithful representation of a company's operating performance. A common method that harms accounting quality is earnings management through accruals [8]. Notably, earnings management is a common feature of Asian firms that have a pyramidal holding structure, leading to controlling shareholders gaining significant control and exacerbating the minor shareholders' wealth [10]. The agency problem arising from this pyramidal holding structure is prevalent in SOEs that are controlled by one dominant share. In contrast, non-state-owned capital is more eager to promote its competitiveness through superior products to attract more consumers and reduce financing costs in the capital market to obtain more investment capital. As non-state-owned shareholders are more efficiently affected by marketization than SOEs under single-state ownership, they have more incentives to improve the irrational structure of

internal management mechanisms. This leads to enhanced market competitiveness and an increase in enterprise innovation.

Recent studies have consistently reported the effect of state ownership on various financial reporting environments. However, the results of prior research are not consistent. First, studies suggesting that state ownership reduces accounting quality are as follows. Using both public and private European firms, Ref. [20] show that state-owned firms report less conservative and highly managed earnings than non-state-owned firms do. The study also documents that the low-quality accounting information measured by accruals and accounting conservatism is prevalent in public firms, suggesting that capital market monitoring does not work effectively in European markets. Reference [21] find similar results using 45 countries' data. The study compares the effects of state ownership and foreign ownership on earnings quality. The evidence shows negative (positive) relationship between state (foreign) ownership and earnings quality. Reference [22] document the negative relationship between state ownership and stock price informativeness. In particular, using 41 countries from 1980 to 2012, the study shows that an increase in state ownership is related to lower stock price variations. Moreover, they find that this relationship is more pronounced in countries with lower political constraints. There are other studies that examine the level of earnings itself, rather than the quality of it. For instance, using firms in Norway, Ref. [23] show that the operating performance measured by the return on assets is higher for privately owned enterprises (POEs) than that for SOEs. Using meta-analysis, Ref. [24] document the negative impact of state ownership on firm performance. Accordingly, studies using Chinese firms have found similar results. For instance, Ref. [4] compares the accounting quality of SOEs and privately owned enterprises in China. The study documents that SOEs show lower earnings quality than privately owned enterprises in all industries. Reference [5] find that firms in provinces with low gross domestic product (GDP) compared to the national level are more likely to engage in earnings management. This relationship is more pronounced in local state-owned enterprises, showing that SOEs reveal less transparent accounting information. Similarly, Ref. [6] show that the negative impact of mixed-ownership reform is significant in firms controlled by local governments in the eastern region of China.

Second, there is an opposite view that mixed-ownership is inferior to state ownership with respect to accounting quality considering that the governance structure is less stable in non-SOEs. In this sense, Ref. [7] show that rent-seeking activities promote greater earnings management; however, the relationship is weaker in SOEs. The study suggests that non-SOEs are more engaged in earnings' management results from rent-seeking. Similarly, Ref. [25] find that SOEs report less managed earnings than non-SOEs. The study interprets this evidence, as the government's protection of SOEs reduces the pressure on managers to move earnings upward. Some other studies show no relationship between earnings management and state ownership. For instance, using private Italian firms, Ref. [26] report that the level of state ownership has no relationship with accrual management.

Collectively, it is still an open question whether state ownership positively or negatively affects the accounting quality of SOEs. In particular, the results from the same country show different conclusions. Moreover, the evidence from the developed market may differ from that of a planned economy such as China. The ultimate controller of Chinese-listed SOEs is the state which leads to the agent conflicts between primary shareholders and small and medium-sized non-state ownership [27]. China's SOEs have shouldered the social burden of increasing taxes and executives have incentives for political promotion. Therefore, the goal of state ownership and executives is to use state-owned assets for political purposes, thereby making value maximization the secondary goal of the operation. This is very different from the goal pursued by non-state-owned shareholders and infringes on the rights of small and medium-sized shareholders, resulting in an increase in earnings management and information asymmetry. Therefore, this study proposes and tests the following hypothesis:

Hypothesis 1 (H1). *State ownership is negatively related with the accounting quality of SOEs.*

2.2.2. The Effect of Industry Competition

On 23 September 2015, the State Council issued Opinions on the Development of a Mixed Ownership Economy by State-owned Enterprises (hereafter, *Opinions*). Subsequently, *Opinions* emphasizes that the basic principle of mixed-ownership reform of SOEs is that, in relation to national security and economic lifeline industries, state-owned capital's holding status must still be maintained. As the state-owned economy is the mainstay of China's economic development, in order to ensure the smooth and unified development of all aspects of China's economy, SOEs cover both competitive and non-competitive industries. Thus, *Opinions* require that SOEs in monopoly industries, such as energy, communications, and water conservancy, should be chosen by the all-state-control method to ensure the safety of the national economy. The discriminatory application of such reforms in national infrastructure industries and other industries suggests that the aforementioned relationship in H1 may differ for industries that are largely monopolistic versus competitive.

Prior research finds systematic differences in accounting quality between competitive and non-competitive industries. Reference [28] finds that competition with potential entrants leads to an increase in the quantity and quality of voluntary forecast disclosures. As the infrastructure industries are monopolistic in general, the positive relationship between state ownership and the level of earnings management is expected to weaken in competitive industries. In particular, because naturally monopolistic industries (e.g., electricity, heat, pipeline transportation, oil and natural minerals, etc.) have been in a monopolistic business environment for a long time, there are widespread control failures such as low operational efficiency and poor service quality. Consistently, Ref. [29] show that mixed-ownership reform positively affects innovation investment, especially in competitive industries. In a similar context, Ref. [23] argue that SOEs may learn from their competitors. In particular, the study shows that the return on assets of SOEs is not different across industries with different competition levels; however, POEs report lower return on assets when the competition level increases. There is also evidence, though, that industry competition increases earnings management. For instance, using 41 countries around the world, Ref. [30] show that product market competition is positively related to earnings management through accruals.

Reference [31] examine the relation between state ownership and firm innovation, and find that SOEs with no dominant state shares (less than 50% of shares) are more innovative than SOEs with dominant state shares (more than 50% of shares) or non-SOEs. This evidence supports the fact that a lower level of state ownership is beneficial for efficient resource allocation such as R & D expenditure in an environment in which a certain level of competition is needed to drive innovation. However, there is a lack of empirical evidence on the effect of industry competition on state ownership and accounting quality. Therefore, this study proposes and tests the following hypothesis:

Hypothesis 2 (H2). *The negative relationship between state ownership and accounting quality is less pronounced in competitive industries than in non-competitive industries.*

2.2.3. State Ownership and Accounting Quality over Time

The evidence that SOEs have lower accounting quality stems from the fact that the government covers even SOEs which have reported losses. Consistently, Ref. [32] show that banks have less concern for SOE clients because their operations are assured by the government. Interestingly, the study also presents evidence that state-owned banks require less conservative accounting for borrowers. In the same manner, Ref. [33] provide evidence that there is a serious bias even in the judicial process. Specifically, the study finds that SOE defendants with political connections obtain more favorable results than non-SOE defendants. Furthermore, they receive higher stock returns and more favorable litigation results in appeals to the courts.

To overcome these inefficiencies in SOEs, the Chinese government has attempted to improve the performance of SOEs since the late 1970s. Reference [3] classify governmental reforms related to SOEs over time from the 1970s to the present. In the late 1970s, the government began to empower SEOs with independent rights under a planned economic system. Subsequently, throughout the 1980s and the 1990s, the government separated ownership from operating rights and formed a modern corporate structure following the introduction of a market economy. The reform continued in the 2000s but the government's ownership of SOEs remained unchanged. For example, the central government still maintains ownership of large SOEs, while local governments maintain control of small SOEs.

In the 2010s, based on the governmental anticorruption campaign, the Chinese government attempted to reduce interference on SOEs and allow them to compete with POEs. For instance, one of the purposes of the regulation claimed in the 18th Central Committee of the Chinese Communist Party is to promote the establishment of a standardized corporate governance structure by the entry of non-state-owned capital and to enhance the development of SOEs. By boosting external monitoring through increased non-state-owned shares, it is expected to improve the quality of corporate accounting information, which can alleviate the principal–agent problem in SOEs.

While not much research has been conducted yet, some recent research has shown that the recent entry of non-state-owned capital into SOEs is expected to have an impact on financial reporting. For instance, Ref. [9] find that the participation of non-state-owned shareholders can improve the quality of the internal control of SOEs. Reference [34] find that after the reform, firms are more likely to contract with the international Big 4 auditors than local auditors. Reference [29] view that mixed-ownership reform is positively related to an innovative investment, leading to a sustainable firm.

As such, mixed-ownership reform of SOEs has been an important research topic in recent years [3,6,18,19]. Indeed, the application of appropriate regulations to SOEs and the compliance of SOEs with these regulations have significant impacts on the performance and sustainability of firms [35]. Thus, by expanding prior research from an accounting quality perspective, we investigate whether these reforms continue to reduce the negative effects of state ownership over time. Thus, the third hypothesis is as follows:

Hypothesis 3 (H3). *The negative relationship between state ownership and accounting quality diminishes over time as the governmental reform of the SOEs works effectively.*

3. Research Design

3.1. Proxy of Accounting Quality

We use earnings management as a proxy for accounting quality. Discretionary accruals is a common proxy in earnings management research (e.g. [8,15,30]). In particular, we estimate the following modified Jones model [36]:

$$TA_t/A_{t-1} = \beta_0 + \beta_1 (\Delta REV_t - \Delta REC_t)/A_{t-1} + \beta_2 (PPE_t/A_{t-1}) + \varepsilon_t \tag{1}$$

where t and $t-1$ denote time period; Δ shows change in variable; TA is total accruals; A is total assets; REV is sales revenues; REC is account receivables; and PPE is property, plant, and equipment. Notably, the residuals from Equation (1) reveal earnings management. The rationale is that the accruals estimated from the change in revenue and fixed assets are normal accruals, and the remaining residual is discretionary accruals (DA) used in income manipulation. A higher residual value indicates an income-increasing earnings management.

To ensure the impact of extreme firm performance, we use performance-matched discretionary accruals ($PMDA$) as proposed by [37]. Specifically, we classified every observation in each industry-year into five groups based on their performance (ROA) and

calculated the *PMDA* by subtracting the mean value of each group's *DA* from the *DA* of each observation.

3.2. Measuring Industry Competition

To measure the degree of competition, we use the Herfindahl–Hirschman Index (*HHI*) which measures industrial concentration. It is calculated based on the sales values of firms belonging to each industry-year. The larger the *HHI* value, the lower the level of competition in the industry. Specifically, we use the equation shown below:

$$HHI = \Sigma(X_i/X)^2 \tag{2}$$

where X_i is the sales value of company *i* and *X* is the sales value of the industry to which company *i* belongs to. We then constructed the variable *Competition* which equals one when *HHI* is lower than the bottom quartile value and zero otherwise. Thus, *Competition* indicates industries with higher competition rates (lower concentration rates).

3.3. Research Models—Multiple Regression Analyses

We set the following two regression models to test Hypothesis 1:

$$DA = \alpha_0 + \alpha_1 \; StateOwnership + Controls + Year + Industry \tag{3}$$

$$PMDA = \alpha_0 + \alpha_1 \; StateOwnership + Controls + Year + Industry \tag{4}$$

The dependent variables are proxies for accounting quality (*DA* and *PMDA*). We use the state ownership (*StateOwnership*) as the variable of interest. Following Hypothesis 1, we expect a significant and positive coefficient of *StateOwnership* (α_1). The positive coefficient of *StateOwnership* shows a positive relationship between state ownership and income-increasing earnings management.

The following variables are controlled based on prior research [7,15,26,30,34]: natural logarithm of total assets (*Size*); total assets divided by total liabilities (*LEV*); operating cash flow divided by total assets (*CF*); lagged value of *ROA*, where *ROA* is the net income divided by the average assets (*LagROA*); variable equals one if a firm reports net losses and zero otherwise (*Loss*); lagged value of total accruals (*LagAccrual*); natural logarithm of a firm's operating years since its foundation date (*LnAge*); sum of the ownership of top ten shareholders (*Top10_Own*); natural logarithm of the number of independent directors (*lnInd_director*); difference between control rights and cash-flow rights of the controller (*Wedge*); ownership of foreign shareholders (*Foreign_Own*); and a variable equals one for the Big 4 audit firms and zero otherwise (*Big4*). Finally, we control for the year and industry indicators. Consequently, all the statistics in the regression are based on adjustments from firm-level clustering.

The rationale for including the control variables is as follows: To control for firm size and complexity, we include *Size*. *Lev* is included to control for a firm's financial structure. *CF* is controlled to mitigate the cash flow–accrual relationship. Considering that the prior year's operating performance affects the current level of earnings management due to the inherent reverse effect of accruals, we include *LagROA* and *LagAccrual*. To control for the firm's operating age, we include *LnAge*. To control for the governance structure, *Top10_Own*, *lnInd_director*, *Wedge*, and *Foreign_Own* are included. Previous studies document a negative relationship between accruals management and auditor size; thus, we include *Big4*. Lastly, year and industry fixed effects are included to control for the yearly and industrial effects on earnings management.

Next, we apply the following models to test Hypothesis 2:

$$DA = \alpha_0 + \alpha_1 \; StateOwnership + \alpha_2 \; Competition + \alpha_3 \; StateOwnership * Competition + Controls + Year + Industry \tag{5}$$

$$PMDA = \alpha_0 + \alpha_1 \; StateOwnership + \alpha_2 \; Competition + \alpha_3 \; StateOwnership * Competition + Controls + Year + Industry \tag{6}$$

Taking *Competition* as a proxy variable of the level of competition within the industry, we multiply it by the state-owned capital of the SOEs (*StateOwnership*). In this way, the interaction variable shows whether the positive relationship between state-owned capital and discretionary accrual incrementally reduces in competitive industries. Thus, we expect a negative and significant coefficient of *StateOwnership * Competition* (α_3).

Finally, we use the following models to test Hypothesis 3:

$$DA = \alpha_0 + \alpha_1\ StateOwnership + \alpha_2\ StateOwnership * Trend + Controls + Year + Industry \tag{7}$$

$$PMDA = \alpha_0 + \alpha_1\ StateOwnership + \alpha_2\ StateOwnership * Trend + Controls + Year + Industry \tag{8}$$

Here, the *Trend* variable has a value of 0 for the sample beginning year and increases by 1 each year. Therefore, the change in the relationship between the *StateOwnership* and the dependent variables over time is captured by α_2. The coefficient of *StateOwnership* (α_1) shows the effect of state ownership on earnings management in 2009. We expect positive and negative coefficients for α_1 and α_2, respectively.

3.4. Data

We use SOEs listed in the A-share market in China from 2009 to 2017 as our sample. The related data of the relevant listed equity information of SOEs, financial information, and industry competition degree are derived from the China Stock Market and Accounting Research Database (CSMAR). We use A-share listed SOEs for three reasons. First, being the reform of the mixed-ownership of listed SOEs is relatively stable in A-share firms. Second, the information disclosure of listed companies is more comprehensive and accurate, making the research results more reliable. Third, we do not use unlisted SOEs as these are completely controlled by the government or state-owned groups with no non-state ownership. We also restrict our observations to non-financial industry companies because financial industry companies' financial statements differ from those of non-financial industry companies. The final sample consisted of 8115 firm–year observations.

Table 1 presents the yearly distribution of the sample. As Hypothesis 2 considers industry competition, we also present firms operating in competitive and non-competitive industries based on *HHI*. For instance, the last year of our sample consists of 234 firms and 711 firms belonging to competitive and non-competitive industries, respectively.

Table 1. Sample distribution by year.

Year	2009	2010	2011	2012	2013
Competitive industry	161	237	181	188	287
Non-competitive industry	638	599	668	729	649
Sub-total	799	836	849	917	936
Year	**2014**	**2015**	**2016**	**2017**	**Total**
Competitive industry	270	227	225	234	2010
Non-competitive industry	679	718	714	711	6105
Sub-total	949	945	939	945	8115

[1] Table 1 shows sample distribution by year and industry competition.

4. Empirical Results

4.1. Descriptive Statistics

Table 2 presents descriptive statistics for the variables. The average value of *State-Ownership* is 0.324. It shows that in the listed SOEs in China, the average proportion of state-owned capital is 32.4%. The portion is similar to the numbers reported in previous studies (e.g., [38]). The average values of *DA* and *PMDA* are −0.002 and −0.003, respectively. The mean value of *Competition* is 0.248. This is obvious because this indicator variable equals one for the lowest quartiles based on *HHI*. Other variables are consistent to

those reported in previous studies. For instance, the mean values of the ownership of the top ten shareholders is 0.560. The Big 4 audit firms have 9.7% of market share on average.

Table 2. Descriptive statistics.

Variable	Mean	STD	P25	Median	P75
StateOwnership	0.324	0.193	0.190	0.325	0.465
DA	−0.002	0.094	−0.043	−0.002	0.039
PMDA	−0.003	0.088	−0.044	−0.002	0.038
Competition	0.248	0.432	0.000	0.000	0.000
Size	22.584	1.399	21.616	22.424	23.468
LEV	0.535	0.206	0.383	0.546	0.688
CF	0.041	0.074	0.002	0.041	0.084
LagROA	0.031	0.058	0.008	0.028	0.057
Loss	0.120	0.325	0.000	0.000	0.000
LagAccrual	−0.016	0.097	−0.061	−0.017	0.022
LnAge	2.787	0.318	2.639	2.833	2.996
Top10_Own	0.560	0.158	0.445	0.561	0.672
lnInd_director	1.202	0.193	1.099	1.099	1.386
Wedge	0.039	0.073	0.000	0.000	0.036
Foreign_Own	0.014	0.059	0.000	0.000	0.000
Big4	0.097	0.295	0.000	0.000	0.000

[1] Variable definitions are as follows: *StateOwnership* = state ownership; *DA* = discretionary accruals; *PMDA* = performance-matched discretionary accruals; *Competition* = equals one when *HHI* is lower than the bottom quartile value and zero otherwise; *Size* = natural logarithm of total assets; *LEV* = total assets divided by total liabilities; *CF* = operating cash flow divided by total assets; *LagROA* = lagged value of *ROA*, where *ROA* is the net income divided by the average assets; *Loss* = equals one if a firm reports net losses and zero otherwise; *LagAccrual* = lagged value of total accruals; *LnAge* = natural logarithm of a firm's operating years since its foundation date; *Top10_Own* = sum of the ownership of top ten shareholders; *lnInd_director* = natural logarithm of the number of independent directors; *Wedge* = difference between control rights and cash-flow rights of the controller; and *Foreign_Own* = ownership of foreign shareholders; *Big4* = equals one for the Big 4 audit firms and zero otherwise.

Table 3 reports the statistical results of the Pearson correlation coefficient. There are significant and positive correlations between *StateOwnership* and earnings management for both *DA* and *PMDA*. Thus, the increase in the capital of SOEs leads to a decline in accounting quality, at least in the univariate correlation. There is a significant and negative correlation between *Competition* and *DA* and *PMDA*, which indicates that improving the competitiveness of the industry can reduce earnings' manipulation behavior within the enterprise. It can be seen that the results of the univariate analysis initially support the negative impact of the state-owned capital on accounting quality. However, the results of the univariate analysis are not sufficient to explain the correlations among the variables. Next, we perform multiple regression analyses with full consideration of the control variables.

4.2. Regression Analyses

To verify the impact of state ownership on the earnings quality of SOEs, we present the results of testing Hypothesis 1 in Table 4. In model (1), when the dependent variable is *DA*, the coefficient of *StateOwnership* is 0.010 and is significant at the 5% level. The coefficient of *StateOwnership* is 0.009 and is significant at the 10% level when the dependent variable is *PMDA*. This indicates that an increase in the proportion of state capital in SOEs leads to a decline in earnings quality.

Table 3. Correlation matrix.

Variable	1. *StateOwnershp*	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
2. *DA*	0.040	1.000													
	(<0.001)														
3. *PMDA*	0.020	0.814	1.000												
	(0.072)	(<0.001)													
4. *Competition*	−0.086	−0.028	−0.018	1.000											
	(<0.001)	(0.010)	(0.098)												
5. *Size*	0.181	0.074	0.048	−0.201	1.000										
	(<0.001)	(<0.001)	(<0.001)	(<0.001)											
6. *LEV*	−0.038	−0.040	0.025	−0.106	0.342	1.000									
	(0.001)	(<0.001)	(0.027)	(<0.001)	(<0.001)										
7. *CF*	0.047	−0.564	−0.568	−0.016	0.042	−0.193	1.000								
	(<0.001)	(<0.001)	(<0.001)	(0.156)	(<0.001)	(<0.001)									
8. *LagROA*	0.085	0.081	−0.024	−0.005	0.105	−0.375	0.222	1.000							
	(<0.001)	(<0.001)	(0.030)	(0.654)	(<0.001)	(<0.001)	(<0.001)								
9. *Loss*	−0.051	−0.176	−0.031	0.043	−0.126	0.220	−0.172	−0.257	1.000						
	(<0.001)	(<0.001)	(0.005)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)							
10. *LagAccrual*	0.016	0.138	0.110	−0.019	−0.004	−0.026	−0.236	0.244	−0.021	1.000					
	(0.159)	(<0.001)	(<0.001)	(0.095)	(0.707)	(0.021)	(<0.001)	(<0.001)	(0.058))						
11. *LnAge*	−0.155	−0.012	−0.001	−0.012	0.026	0.087	−0.052	−0.075	0.015	0.011	1.000				
	(<0.001)	(0.298)	(0.955)	(0.297)	(0.018)	(<0.001)	(<0.001)	(<0.001)	(0.177)	(0.305)					
12. *Top10_Own*	0.493	0.050	0.009	−0.141	0.401	−0.015	0.125	0.163	−0.112	−0.034	−0.237	1.000			
	(<0.001)	(<0.001)	(0.420)	(<0.001)	(<0.001)	(0.176)	(<0.001)	(<0.001)	(<0.001)	(0.002)	(<0.001))				
13. *lnInd_director*	0.022	0.023	0.022	−0.078	0.312	0.096	0.034	0.033	−0.026	−0.034	−0.097	0.148	1.000		
	(0.049)	(0.040)	(0.049)	(<0.001)	(<0.001)	(<0.001)	(0.002)	(0.003)	(0.017)	(0.002)	(<0.001)	(<0.0001)			
14. *Wedge*	−0.205	0.000	−0.009	0.006	0.015	−0.008	0.047	0.024	−0.006	−0.025	−0.009	0.088	−0.005	1.000	
	(<0.001)	(0.968)	(0.416)	(0.610)	(0.168)	(0.446)	(<0.001)	(0.028)	(0.613)	(0.023)	(0.432)	(<0.001)	(0.667)		
15. *Foreign_Own*	−0.012	−0.010	0.004	−0.071	0.339	0.077	0.040	0.004	−0.015	−0.050	−0.052	0.348	0.166	−0.031	1.000
	(0.290)	(0.370)	(0.709)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(0.744)	(0.173)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(0.005)	
16. *Big4*	0.016	−0.007	−0.020	−0.091	0.405	0.067	0.063	0.077	−0.071	−0.024	−0.061	0.251	0.163	0.104	0.464
	(0.139)	(0.551)	(0.068)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(0.030)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)

[1] *p*-values are shown in the parentheses. [2] See Table 2 for the variable definition.

In terms of control variables, the coefficients of firm size (*Size*) are 0.007 and 0.006, which are significant at the 1% level, indicating that there is a significant positive relationship between the size of SOEs and earnings management. The coefficients of leverage ratio (*LEV*) are −0.044 and −0.023, which are significant at the 1% level. The coefficient of *CF* is significantly negative at the 1% level. This indicates that the decrease in the cash flow of SOEs will urge the managers of enterprises to use earnings manipulation to conceal the adverse situation of enterprises in terms of operation. *LagROA* shows a significant positive correlation at the 1% level. *Loss* is negative and significant in both models. The number of internal directors is not important for the improvement of the earnings quality of SOEs, which shows that, although the Chinese government encourages enterprises to establish independent director systems to supervise the operation and internal control of SOEs, the system does not produce actual results in this state. However, the coefficients of *Wedge* are 0.032 and 0.022, which are significantly positive. Thus, if the gap between control rights and cash-flow rights expands, the quality of earnings decreases through upward earnings management. The negative coefficients show that the entry of foreign capital (*Foreign_Own*) and the Big 4 auditors (*Big4*) can alleviate the problem of earnings manipulation of insiders in SOEs to a certain extent.

Table 4. The effect of state ownership on accounting quality (H1).

Variable	(1) Dep. = DA		(2) Dep. = PMDA	
	Coefficient	**t-Value**	**Coefficient**	**t-Value**
Intercept	−0.136 ***	−5.15	−0.132 ***	−4.80
StateOwnership	**0.010 ****	**1.96**	**0.009 ***	**1.78**
Size	0.007 ***	6.45	0.006 ***	5.74
LEV	−0.044 ***	−6.84	−0.023 ***	−3.55
CF	−0.919 ***	−47.44	−0.828 ***	−45.14
LagROA	0.207 ***	8.24	0.097 ***	4.23
Loss	−0.070 ***	−20.98	−0.033 ***	−10.79
LagAccrual	−0.019 *	−1.90	−0.012	−1.13
LnAge	0.001	0.30	0.003	0.88
Top10_Own	0.020 **	2.35	0.007	0.79
lnInd_director	−0.000	−0.08	−0.000	−0.05
Wedge	0.032 ***	2.58	0.022 *	1.83
Foreign_Own	−0.027 *	−1.72	0.003	0.14
Big4	−0.005 *	−1.72	−0.007 **	−2.14
Year	Included		Included	
Industry	Included		Included	
F-value	52.25 ***		57.10 ***	
Adj. R^2	0.477		0.400	
Observations	8115		8115	

[1] ***, **, and * denote significance level at 1%, 5%, and 10%, respectively. [2] t-values are corrected for firm-level clustering. [3] See Table 2 for the variable definition.

Table 5 presents the results of the multiple regression analysis of testing Hypothesis 2. In Hypothesis 2, we construct competition as a proxy dummy variable for highly competitive industries and multiply it by the proxy variable of state ownership. It explores the impact of state-owned capital on earnings management declines in firms with high competition. Under the multiple regression results in Table 5, without considering the entry of the competition mechanism, the regression coefficients of the *StateOwnership* are 0.013 and 0.014 and both are significantly positive. These results show that there is a positive relationship between state-owned capital and earnings management in a less competitive industry. In contrast, the interaction terms of the variables *StateOwnership* and *Competition* are −0.022 and −0.023, respectively, which are significantly negative at the 5% level. This indicates that the competition mechanism of the industry can effectively improve the decline in earnings quality caused by the increase in the proportion of state-owned capital, which effectively supports Hypothesis 2. The active introduction of industry competi-

tion mechanisms in industries can effectively improve the internal governance problems of SOEs.

In terms of control variables, there is a significant positive correlation between earnings management and the size of the enterprise, the lagged operating performance of the enterprise, the total number of shares of the top ten shareholders, the firm ages, and the difference between the control and cash-flow rights of the ultimate controller. There is a negative and significant relationship between earnings management and leverage ratio, cash flow, loss, and lagged accruals.

Table 5. The effect of industry competition on the association between state ownership and accounting quality (H2).

Variable	Dep. = *DA*		Dep. = *PMDA*	
	Coefficient	**t-Value**	**Coefficient**	**t-Value**
Intercept	−0.157 ***	−6.54	−0.110 ***	−4.47
StateOwnership	0.013 **	2.21	0.014 **	2.38
Competition	0.004	0.96	0.005	1.33
StateOwnership * Competition	**−0.022 ****	**−2.09**	**−0.023 ****	**−2.29**
Size	0.007 ***	6.38	0.005 ***	4.82
LEV	−0.053 ***	−8.22	−0.037 ***	−5.94
CF	−0.864 ***	−44.37	−0.768 ***	−42.07
LagROA	0.205 ***	8.22	0.101 ***	4.43
Loss	−0.064 ***	−19.01	−0.026 ***	−8.60
LagAccrual	−0.055 ***	−5.49	−0.053 ***	−4.85
LnAge	0.006 **	2.06	0.002	0.75
Top10_Own	0.033 ***	3.90	0.013	1.62
lnInd_director	0.006	1.17	0.009 *	1.72
Wedge	0.036 ***	2.76	0.028 **	2.17
Foreign_Own	−0.031 *	−1.65	0.016	0.83
Big4	−0.010 ***	−2.81	−0.011 ***	−3.09
Year	Included		Included	
Industry	Not included		Not included	
F-value	115.23 ***		88.15 ***	
Adj. R^2	0.444		0.365	
Observations	8115		8115	

[1] ***, **, and * denote significance level at 1%, 5%, and 10%, respectively. [2] *t*-values are corrected for firm-level clustering. [3] See Table 2 for the variable definition. [4] Industry fixed effects are not included due to linear dependency with the *Competition* variable.

Collectively from the results in Tables 4 and 5, we show that an increase in the state-ownership ratio of SOEs leads to a drop in the quality of enterprises' earnings. However, SOEs can disperse the risk of internal control caused by the high proportion of state-owned capital through the competitive mechanism which improves the quality of earnings and benefits for maximizing the value of enterprises.

Next, we test our third hypothesis, which expects a decline in the positive relationship between state ownership and earnings management over time. The results are presented in Table 6. In model (1), when the dependent variable is *DA*, the coefficient of *StateOwnership* is 0.031 and is positively significant at the 1% level. The coefficient of *StateOwnership* is 0.022 and is also positive and significant at the 1% level when the dependent variable is *PMDA*. As the variable *Trend* increases by 1 by each year and takes 0 in 2009, these results show that there is a positive and significant relationship between state ownership and discretionary accruals in 2009. Interestingly, the interaction term of *StateOwnership * Trend* is negative in both models (coefficient = −0.006 and −0.004, respectively). This indicates that the positive relationship between state ownership and earnings management incrementally declines over time. Thus, the diminishing relationship over time can be interpreted as the governmental reform of the SOEs effectively influences the financial reporting practice of SOEs.

Table 6. The association between state ownership and accounting quality over time (H3).

Variable	Dep. = *DA*		Dep. = *PMDA*	
	Coefficient	*t*-**Value**	**Coefficient**	*t*-**Value**
Intercept	−0.116 ***	−4.63	−0.118 ***	−4.60
StateOwnership	0.031 ***	4.48	0.022 ***	3.18
StateOwnership ∗ Trend	**−0.006 ***	**−5.68**	**−0.004 ***	**−3.58**
Size	0.007 ***	6.37	0.006 ***	5.78
LEV	−0.044 ***	−6.96	−0.024 ***	−3.74
CF	−0.909 ***	−47.58	−0.815 ***	−45.50
LagROA	0.197 ***	7.86	0.081 ***	3.57
Loss	−0.069 ***	−20.60	−0.032 ***	−10.48
LagAccrual	−0.020 **	−1.99	−0.012	−1.08
LnAge	−0.001	−0.27	0.001	0.40
Top10_Own	0.023 ***	2.71	0.010	1.13
lnInd_director	−0.001	−0.31	−0.001	−0.22
Wedge	0.025 **	2.07	0.017	1.47
Foreign_Own	−0.031 **	−1.96	−0.001	−0.05
Big4	−0.006 *	−1.73	−0.007 **	−2.19
Year	Not Included		Not Included	
Industry	Included		Included	
F-value	55.65 ***		45.16 ***	
Adj. R^2	0.473		0.393	
Observations	8115		8115	

[1] ***, **, and * denote significance level at 1%, 5%, and 10%, respectively. [2] *t*-values are corrected for firm-level clustering. [3] See Table 2 for the variable definition. [4] Year fixed effects are not included due to linear dependency with the *Trend* variable.

5. Discussions

SOEs are the product of a planned economy and play an extremely significant role in China's economic development. Since the founding of the nation, SOEs have been undertaken to provide tax protection and maintain the stable development of the national economy. However, the problem of one dominating share leads to the fact that SOEs do not maximize enterprise value as the ultimate goal of operation, which leads to the damage of the rights and interests of non-state-owned small and medium-sized shareholders. Furthermore, in the absence of external monitoring by the capital market, there is a chance that SOE managers artificially manipulate the operating performance of SOEs in order to maximize their personal interests or to achieve the performance required by the government, which will lead to a decline in accounting quality.

It is a recent worldwide trend to reform the governance structure of SOEs. Reference [1] view that SOEs have some hybrid aspects, meaning that they are adapting to changes such as the mix in ownership and control. This is a dominant feature nowadays as SOEs act to balance between state ownership and outside stakeholders. The Chinese government is also in the mood to join this trend. In order to improve the internal control of SOEs, the 18th Central Committee of the Chinese Communist Party clearly stated that, "We should take mixed ownership reform as the first goal of SOE reform, vigorously develop mixed ownership economy, strengthen the supervision of non-state-owned capital over SOE management, and improve the quality of accounting information of SOEs." Therefore, the government expects an improvement in the quality of the accounting information of SOEs. With respect to the reform, this study investigates and reports the influence of the change in the state-owned capital proportion of SOEs on accounting quality, thereby providing practical implications.

Using SOE data from 2009 to 2017, the results indicate that there is a significant and positive relationship between the proportion of state-owned capital and earnings management. Considering previous studies that find mixed results [26] and even a negative relationship between state ownership and earnings management [7,25], the finding of current study shows different evidence from the results of these studies. However, our

finding coincides with the studies which state that state ownership is negatively related to accounting quality [20,21]. Considering the competitive factors of the industry, we find that the competitive mechanism of SOEs in highly competitive industries can effectively restrain the negative impact of state-owned capital on earnings quality. Thus, we interpret this evidence as competition strengthens the internal control of SOEs. This finding coincides with [29] that show mixed-ownership reform works efficiently in competitive industries. In addition, the current study finds that the positive relationship between state-owned capital and earnings management diminishes over time. This shows that the introduction of non-state-owned capital in SOEs and the implementation of mixed-ownership reform can play an effective role in supervising the management of SOEs and improving the quality of accounting information. This demonstrates that the recent reform effectively curbs the earnings manipulation of SOEs.

6. Conclusions

In this study, we hypothesize and test whether state ownership is negatively related with the accounting quality of SOEs. The finding of the study supports the hypothesis by showing a significant and positive relationship between the level of state ownership and earnings management. Next, we expect that this positive relationship between state ownership and earnings management would be less pronounced in competitive industries. The result is consistent with this prediction and suggests that an introduction of industry competition effectively improves the internal governance of SOEs. Lastly, our third hypothesis predicts that the negative relationship between state ownership and accounting quality diminishes over time if the reform of the SOEs works effectively. We find a diminishing relationship over time which can be interpreted as the governmental reform of the SOEs seems to have succeeded.

The findings of the current study contribute to academic research by supporting the fact that SOEs have incentives to improve the irrational structure of internal management mechanisms, enhance market competitiveness, and enlarge outside ownership. In particular, this study coincides with prior research that documents the evidence that non-state-owned capital is more prone to promoting a company's competitiveness through superior monitoring. In addition, this study extends prior research that shows a reduction in financing cost and an increase in firm value through diversifying ownership shares. Lastly, the findings of this study provide an initial empirical evidence explaining the effectiveness of the recent mixed-ownership reform.

Overall, this study not only enriches the research related to earnings management but also extends the research related to the accounting quality of SOEs and regulations. Based on the findings of the present study, we propose that there should be a future study that extends the current findings by comparing the accounting quality of SOEs under a planned economy and a market economy. Furthermore, it is also necessary to analyze whether the effects of mixed-ownership reform continue over a long-term period. Finally, given that a mix of different types of shares are now allowed to SOEs, a follow-up study could investigate which type of non-state ownership contributes to better accounting quality. For example, the effect of an increase in foreign shares can be compared to the effect of other shares.

This study has some limitations. First, as we consider a single specific country, caution is needed when generalizing the evidence of this study to other countries. We believe that future research can develop more evidence using other countries and various types of enterprises. Second, this study demonstrates that in some extent, the government's mixed-ownership reform is successfully working. However, as the eventual success of a regulation appears in the long run, follow-up studies need to re-examine the relationship documented in the current study when longer time-series data are available. Third, while this study focuses on SOEs, it may be possible to analyze the differences between the two groups in conjunction with POEs. Finally, the study finds that the industry competition influences the relationship between state ownership and accounting quality. Future research may

investigate whether other cross-sectional characteristics of firms or macroscopic variables have an incremental effect on the relationship.

References

1. Bruton, G.D.; Peng, M.W.; Ahlstrom, D.; Stan, C.; Xu, K. State-owned enterprises around the world as hybrid organizations. *Acad. Manag. Perspect.* **2015**, *29*, 92–114. [CrossRef]
2. Capalbo, F.; Sorrentino, M.; Smarra, M. Earnings management and state ownership: A literature review. *Int. J. Bus. Manag.* **2018**, *13*, 117–128. [CrossRef]
3. Lin, K.J.; Lu, X.; Zhang, J.; Zheng, Y. State-owned enterprises in China: A review of 40 years of research and practice. *China J. Account. Res.* **2020**, *13*, 31–55. [CrossRef]
4. Zhuang, C.S. The Impact of State Ownership on Earning Quality: A Comparison Between Private-Owned Enterprises and State-Owned Enterprises in China. Ph.D. Thesis, BS Dissertation, NYU Shanghai, Shanghai, China, 2017.
5. Chen, X.; Cheng, Q.; Hao, Y.; Liu, Q. GDP growth incentives and earnings management: Evidence from China. *Rev. Account. Stud.* **2020**, *25*, 1002–1039. [CrossRef]
6. Wang, H.; Wang, W.; Alhaleh, S.E.A. Mixed ownership and financial investment: Evidence from Chinese state-owned enterprises. *Econ. Anal. Policy* **2021**, *70*, 159–171. [CrossRef]
7. Liu, B.; Lin, Y.; Chan, K.C.; Fung, H.G. The dark side of rent-seeking: The impact of rent-seeking on earnings management. *J. Bus. Res.* **2018**, *91*, 94–107. [CrossRef]
8. Dechow, P.; Ge, W.; Schrand, C. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *J. Account. Econ.* **2010**, *50*, 344–401. [CrossRef]
9. Liu, Y.; Zhen, Q.; Cai, G. Do Non-state-owned Shareholders Improve the Internal Control Quality in SOEs? *Account. Res.* **2016**, *11*, 61–68.
10. Claessens, S.; Djankov, S.; Lang, L.H. The Separation of Ownership and Control in East Asian Corporations. *J. Financ. Econ.* **2000**, *58*, 81–112. [CrossRef]
11. Cheung, Y.L.; Jing, L.; Rau, P.R.; Stouraitis, A. Guanxi, political connections, and expropriation: The dark side of state ownership in Chinese listed companies. *City Univ. Hong Kong Work. Pap.* **2005**, 1–55. [CrossRef]
12. Shleifer, A.; Vishny, R.W. Politicians and Firms. *Q. J. Econ.* **1994**, *109*, 995–1025. [CrossRef]
13. Wu, L. State Ownership, Preferential Tax, and Corporate Tax Burdens. *Econ. Res. J.* **2009**, *44*, 109–120.
14. Healy, P.; Palepu, K. Information Asymmetry, Corporate Disclosure, and the Capital Market: A Review of the Empirical Disclosure Literature. *J. Account. Econ.* **2001**, *31*, 405–440. [CrossRef]
15. Chaney, P.K.; Faccio, M.; Parsley, D.C. The Quality of Accounting Information in Politically Connected Firms, J. *Account. Econ.* **2011**, *51*, 58–76. [CrossRef]
16. Xia, J.; Zhang, Y. The Conflicts between Control Rights and Incentives: An Empirical Analysis on the Effect of Stock Incentives in China. *Econ. Res. J.* **2008**, *479*, 87–98.
17. Zheng, Z.; Li, D.X.; Xu, R.; Lin, R.T.; Zhao, W.J. The Political Promotion of the SOE Executives: A Case Study on a Certain Corporation of a Certain Province. *Manag. World* **2012**, *10*, 146–156.
18. Huang, S. On The Mixed Ownership Reform of Chinese State Owned Enterprises. *Econ. Manag. J.* **2014**, *36*, 1–10.
19. Ma, L.F.; Wang, L.L.; Zhang, Q. Pecking order of mixed ownership: The logic of market. *China Indus. Econ.* **2015**, *7*, 5–20.
20. Gaio, C.; Pinto, I. The role of state ownership on earnings quality: Evidence across public and private European firms. *J. Appl. Account. Res.* **2018**, *19*, 312–332. [CrossRef]
21. Ben-Nasr, H.; Boubakri, N.; Cosset, J.C. Earnings quality in privatized firms: The role of state and foreign owners. *J. Account. Public Policy* **2015**, *34*, 392–416. [CrossRef]
22. Ben-Nasr, H.; Cosset, J.C. State ownership, political institutions, and stock price informativeness: Evidence from privatization. *J. Corp. Financ.* **2014**, *29*, 179–199. [CrossRef]
23. Goldeng, E.; Grünfeld, L.A.; Benito, G.R. The performance differential between private and state owned enterprises: The roles of ownership, management and market structure. *J. Manag. Stud.* **2008**, *45*, 1244–1273. [CrossRef]

24. Tihanyi, L.; Aguilera, R.V.; Heugens, P.; Van Essen, M.; Sauerwald, S.; Duran, P.; Turturea, R. State ownership and political connections. *J. Manag.* **2019**, *45*, 2293–2321. [CrossRef]

25. Wang, L.; Yung, K. Do state enterprises manage earnings more than privately owned firms? The case of China. *J. Bus. Financ. Account.* **2011**, *38*, 794–812. [CrossRef]

26. Capalbo, F.; Frino, A.; Mollica, V.; Palumbo, R. Accrual-based earnings management in state owned companies: Implications for transnational accounting regulation. *Account. Audit. Account. J.* **2014**, *27*, 1026–1040. [CrossRef]

27. Zhou, Z.; Chen, H. Accounting Information Transparency and Resources Allocation Efficiency: Theory and Empirical Evidence. *Account. Res.* **2008**, *12*, 56–62.

28. Li, X. The impacts of product market competition on the quantity and quality of voluntary disclosures. *Rev. Account. Stud.* **2010**, *15*, 663–711. [CrossRef]

29. Li, C.; Yuan, R.; Khan, M.A.; Pervaiz, K.; Sun, X. Does the Mixed-Ownership Reform Affect the Innovation Strategy Choices of Chinese State-Owned Enterprises? *Sustainability* **2020**, *12*, 2587. [CrossRef]

30. Lemma, T.T.; Negash, M.; Mlilo, M.; Lulseged, A. Institutional ownership, product market competition, and earnings management: Some evidence from international data. *J. Bus. Res.* **2018**, *90*, 151–163. [CrossRef]

31. Cao, X.; Cumming, D.; Zhou, S. State ownership and corporate innovative efficiency. *Emerg. Mark. Rev.* **2020**, *44*, 100699. [CrossRef]

32. Chen, H.; Chen, J.Z.; Lobo, G.J.; Wang, Y. Association between borrower and lender state ownership and accounting conservatism. *J. Account. Res.* **2010**, *48*, 973–1014. [CrossRef]

33. Firth, M.; Rui, O.M.; Wu, W. The effects of political connections and state ownership on corporate litigation in China. *J. Law Econ.* **2011**, *54*, 573–607. [CrossRef]

34. Chen, L.; Huang, J.; Chen, X. Mixed-ownership reform and auditor choice: Evidence from listed state-owned enterprises. *China J. Account. Stud.* **2021**, 1–35. [CrossRef]

35. Boros, A.; Fogarassy, C. Relationship between corporate sustainability and compliance with state-owned enterprises in Central-Europe: A case study from Hungary. *Sustainability* **2019**, *11*, 5653. [CrossRef]

36. Dechow, P.M.; Sloan, R.G.; Sweeney, A.P. Detecting earnings management. *Account. Rev.* **1995**, *70*, 193–225.

37. Kothari, S.P.; Leone, A.; Wasley, C. Performance Matched Discretionary Accrual Measures. *J. Account. Econ.* **2005**, *39*, 163–197. [CrossRef]

38. Hou, W.; Kuo, J.M.; Lee, E. The impact of state ownership on share price informativeness: The case of the Split Share Structure Reform in China. *Br. Account. Rev.* **2012**, *44*, 248–261. [CrossRef]