Macrothink Institute™

International Journal of Accounting and Financial Reporting
ISSN 2162-3082
2017, Vol. 7, No. 1

Earnings Management, Politically Connected CEOs, and Politically Connected Independent Board Members: Evidence from China

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Received: May 24, 2017 Accepted: June 9, 2017 Published: June 12, 2017

doi:10.5296/ijafr.v7i1.11277 URL: https://doi.org/10.5296/ijafr.v7i1.11277

Abstract

This study investigates whether Chinese firms' earnings management behaviors vary systematically with politically connected CEOs and studies the association between Chinese firms' earnings management behaviors and the presence of politically connected independent board members. We find that firms with politically connected CEOs engage in less real earnings management, probably because their political connections make raising capital easier and reduce incentives for earnings management. However, this relationship is weaker in State-Owned Enterprises (SOEs) than in non-SOEs. In addition, we find that politically connected independent board members have significant negative impacts on real earnings management in non-SOEs, suggesting the independent directors with political ties could mitigate real earnings management.

Keywords: political connection, independent directors, accrual-based earnings management, real earnings management, China

1. Introduction

In this study, we investigate whether Chinese firms' earnings management behaviors vary systematically with politically connected CEOs. We also study the association between the earnings management behaviors and the presence of politically connected independent board members. Extant literature has established that political connections have a significant impact on firm performance all over the world (Li, Meng, Wang, & Zhou, 2008; Niessen & Ruenzi, 2010; Wu, Wu, Zhou, & Wu, 2012), and this effect is stronger in transition economies (Conyon, He, & Zhou, 2015; Li & Zhang, 2007).

China as the largest developing economy entity has attracted a lot of attention in academia, and

a number of studies have explored the earnings management behaviors of Chinese firms (C. J. Chen, Chen, & Su, 2001; H. Chen, Chen, Lobo, & Wang, 2011; HAW, Qi, Wu, & Wu, 2005). Many of them find that government ownership is a key factor influencing the earnings management behaviors of Chinese firms (X. Chen, Lee, & Li, 2008), and state-owned enterprises (SOEs) exhibit different degrees of aggressiveness and different patterns of earnings management compared to non-state owned enterprises (Non-SOEs) (Ding, Zhang, & Zhang, 2007). In addition, SOEs are motivated by different incentives for earnings management compared to non-SOEs (Fan & Song, 2017). Most studies argue these differences are caused by the government control rooted in the concentrated state ownership, which leads to tunneling effects in SOEs (e.g., the majority shareholder expropriating minority shareholders; Ding et al., 2007). However, government ownership represents two perspectives: government control and political connections. Most previous studies focus on the government control argument, while political connection perspective is understudied. This study fills this gap and examines whether political connections of the CEO and the independent board members affects the earnings management behaviors of Chinese firms.

By investigating 200 firms included in the China Security Index State-Owned Enterprises 200 (CSI SOE 200) and 200 firms included in the China Security Index Private-Owned Enterprises 200 (CSI POE 200) from 2003 to 2015, we find that firms with politically connected CEOs engage in less real earnings management. We argue that this is because these firms enjoy several benefits due to their CEOs' political ties, such as easier access to bank loans (Claessens, Feijen, & Laeven, 2008), lower cost of capital (Boubakri, Guedhami, Mishra, & Saffar, 2012), and greater likelihood of capturing government contracts (Goldman, Rocholl, & So, 2013), which increase investors' confidence in the firm on the financial market. Therefore, the incentive or the pressure for earnings management is lower in these firms whose CEOs have politically connections, and thus these firms engage in less earnings management activities. However, the effect is weaker in SOEs compared to that in non-SOEs, probably because the political connections of CEOs are redundant in SOEs. SOEs have inherent political connections due to government ownership. We also find that politically connected independent board members are associated with less real earnings management in non-SOEs, but the effect is not significant in SOEs.

Our study has important academic contributions. First, this study is one of the first few studies which explore the association between political connections and earnings management. Second, we contribute to the understanding of the role of independent boards of directors in China, which is understudied in the literature (Wang, 2015). We find that firms with politically connected independent board members engage in less real earnings management in non-SOEs, suggesting that the independent board director as one of the corporate governance mechanisms could help certain type of firms restrict earnings management behavior. Third, our findings contribute to the earnings management literature by identifying a factor that influences the extent of the aggressiveness of earnings management. We find the CEOs' political connections influence earnings management behaviors in both SOEs and non-SOEs, suggesting the political connection is a determinant factor for earnings management. Finally, prior studies predict differences in the behaviors of SOEs and non-SOEs due to tunneling effects induced by their different ownership structures (Friedman, Johnson, & Mitton, 2003; Johnson, La Porta,

Lopez-de-Silanes, & Shleifer, 2000; Li et al., 2008). Our study suggests that the impact of political connections could be another reason for the differences in the behaviors of SOEs and non-SOEs. A large percentage of non-SOEs do not have political connections while all SOEs have political connections due to government ownership, and this difference may cause the earnings management behaviors differences between SOEs and non-SOEs.

Our study has important practical implications as well. Our study links earnings management behaviors to the political connection. More specifically, we find that political connections brought by the CEO could be a brake for real earnings management, while real earnings management is generally believed to possibly jeopardize firms' future performance. For example, a common real earnings management strategy is to cut research and development expenses, which increases current earnings at the expense of future performance. Avoiding such earnings management could be another benefit of political connections. In addition, China is opening to the world and has more investment opportunities for foreign investors; however, people's understanding of the Chinese business environment is still limited. Our study could interest companies that want to do business in China and give them insight into the financial reporting quality of Chinese firms.

The next section of this paper introduces the institutional background in China, reviews the literature, and proposes four hypotheses. The third section introduces the data and research design, followed by the empirical test results. The last section further discusses the results and concludes the paper.

2. Institutional Background and Hypotheses Development

2.1 Institutional Background

Although China has become the second largest economy in the world, it still has a less developed institutional environment than those of Western countries. The gaps in the Chinese economic system compared to Western economic systems include weak investor protection, weak institutional support, weak contract and property rights enforcement, and overreaching interventions by the government (Li et al., 2008). Studies prove that the political connections of firms effectively work as a substitute for formal institutions to overcome these gaps in China's weak institutional environment. For example, the political connection of a firm can help it expand to more markets (Luo, 2003), access capital more easily (Wu et al., 2012), enjoy a lower capital cost (Fan & Hope, 2013), and enhance its monopoly status (Naughton, 2008).

Chinese firms strive to obtain political connections due to these great benefits brought by these relationships. Political connections can be acquired from three main sources: through direct government ownership of the firm, political connections brought by the management (e.g., the CEO), and political connections brought by external members of the board members. SOEs naturally have political connections because the government owns them.

Before 1978, all companies in China were SOEs. To modernize SOEs and increase their profitability, the Chinese government decided to separate the ownership of these organizations from their management (Fan & Hope, 2013). The state controls SOEs via the State-Owned Assets Supervision and Administration Commission (SASAC). SASAC controls the operations of SOEs by appointing managers, evaluating firm performance, and so on.

Non-SOEs were allowed to develop in China after 1978. A current study by Chinese Academy

of Social Sciences shows non-SOEs has been contributing 65% of the country's GDP by 2008. Non-SOEs cannot obtain political connections via ownership; therefore, they must acquire these relationships via the CEO or the board members. The political connections of independent directors become more important in non-SOEs if the CEO and the management team do not have political connections.

For public-traded firms listed on Shanghai and Shenzhen stock exchanges, they are required to include at least two independent members on their boards of directors, and at least one of those independent board members has to be in the accounting profession. Moreover, independent directors had to make up a minimum of one-third of the total board members.

Of note is that the appointments of CEOs and independent directors are different in SOEs and non-SOEs. In SOEs, CEOs are appointed by the SASAC, and the SASAC is likely to influence the appointment of the independent directors, too. On the other hand, the CEOs in non-SOEs could be an executive appointed by the board of directors, the founders of the firms, or from the founding families, or appointed by the controlling individual or family. Non-SOEs could appoint independent directors without the influence of the government. Therefore, when a non-SOE lacks political connections, they could actively acquire them through the appointment of CEO or independent directors.

2.2 The Definition of Political Connection

The literature usually refers to two types of political connections: past work experience in the government or military, and membership in two government related organizations—the National People's Congress (NPC) and the Chinese People's Political Consultative Conference (CPPCC) (Li et al., 2008). The NPC is a legislative authority in the government similar to the congress in western countries, and NPC members have the right to vote on laws and official appointments. The CPPCC is a consultative organization that provides suggestions and comments on public policies of various topics to the government (Guo, 2001).

In our study, we do not include the past work experience in the definition of political connections because of two reasons. First, China has released a new rule to regulate the appointment of retired government officer serving as independent board members in corporations. This regulation was released in October 2013, and it requires government officials to justify positions they have served in for enterprises within 3 years of retirement. After 3 years, firms that hire former government officials need to report their hiring to the relevant government entity. Additionally, no former officials can work for any firm without government approval. In 2013, almost half of independent directors in the public firms had political backgrounds, and a large percentage of them were retired government officers. (Note 1) After the issue of this regulation, most retired officials resigned from their independent director positions. There are rare former offices working as independent directors in public firms. Second, we question if some past work experience, such as a lower level position of government employee or a work experience of 20 years ago, would effectively bring political connections to the firm.

We focus on the other types of political connections in this study: NPC membership and CPPCC membership. We define politically connected CEOs and independent board members as individuals who are or were NPC or CPPCC members.

2.3 Hypotheses Development

Earnings management is defined as the choice of accounting policies or real actions affecting earnings to achieve a financial reporting target (Scott, 1997). In our study, we define earnings management as upward earnings management. Many mechanisms have been identified that could mitigate earnings management, including CEO compensation (Bergstresser & Philippon, 2006) and the use of independent board members (Klein, 2002). However, the political connections of CEOs and independent board members have not been examined yet.

Extant literature has established that the main incentives for earnings management include increasing management compensation, meeting contractual obligations (e.g., debt covenant), and meeting investors' earnings expectation (Scott, 1997). The latter two incentives are in fact correlated, and they are both related to the cost of the firm's capital. Firms have two ways to obtain funds: through debt and the stock market. To borrow money from banks, firms need to report high earnings to show a high likelihood of repaying the loan. After firms receive funds from the banks, they still need to report high earnings that could meet the loan contract requirements regarding firm profitability and to avoid the cost of breaching debt covenants. If firms want to raise funds from the equity market, they also need to report attractive earnings to capture more investors and reduce the cost of capital.

Evidence has been found to prove that political connections could help firms access funds from banks and reduce their costs of capital (Chaney, Faccio, & Parsley, 2011). The relationship between bank funding and political connections is more profound in China, because the government controls most Chinese banks, making the political connections more important. Li et al. (2008) find that politically connected CEOs can help firms obtain loans from banks or other institutions. Wang (2015) finds that non-SOEs with politically connected board directors can access external debt more easily than their non-connected counterparts.

We argue that there is a negative relationship between the extent of a firm's earnings management and the presence of a politically connected CEO or independent board directors for two reasons. First, firms with politically connected CEOs or independent board members have more access to funds compared to firms without these CEOs or independent directors (Claessens et al., 2008). For example, these relationships help firms access bank loans or government bursaries. Therefore, firms' incentives or pressure for earnings management are weaker with the presence of the politically connected CEO or independent board members. Second, in addition to the benefits of accessing capitals easier or at a lower rate, political connections could also make investor have more confidence in the firm's' future performance due to the help of the government. For example, firms could access more markets due to political connection (Luo, 2003). Firms could capture more contracts with the government (Goldman et al., 2013). In addition, firms with political connection enjoy preferential tax treatments (Wu et al., 2012). The bright forecasts of future performance by investors also reduce the incentive or pressure for earnings management for the current period, therefore, firms with political connections may do less earnings management compared to firms without political connections. Formally, our first two hypotheses are as follows:

Hypothesis 1: Firms with politically connected CEOs are involved in less earnings management compared to firms without politically connected CEOs.

Hypothesis 2: Firms with politically connected independent board members are involved in less earnings management compared to firms without politically connected independent board members.

Our Hypotheses 3 and 4 are about the impact of politically connected CEOs or independent directors in SOEs compared to in non-SOEs. SOEs and non-SOEs behave differently in many perspectives. For example, Wu et al. (2012) find that the effects of political connections on firm performance are different for SOEs and non-SOEs. Private firms with politically connected CEOs outperform their counterparts without politically connected CEOs, whereas local SOEs with politically connected CEOs underperform compared to their counterparts that lack politically connected CEOs.

SOEs have political connections from their state ownership, so the political connections associated with CEOs and/or independent directors are redundant. This could explain why the impact of CEO/independent board directors' political connections on firm performance is weaker in SOEs.

We predict that the effects of political connections of CEOs and independent board directors on earnings management are weaker in SOEs than in non-SOEs. In non-SOEs, politically connected COEs and independent board directors would help firms raise funds as argued in Hypothesis 1, reducing the incentives for earnings management. However, in SOEs, government ownership grants political connections to the firm, making redundant the usefulness of the politically connected CEO or independent board directors. Our next hypotheses are:

Hypothesis 3: The association between earnings management and the politically connected CEOs is weaker in SOEs than in non-SOEs.

Hypothesis 4: The association between earnings management and the politically connected independent board members is weaker in SOEs than in non-SOEs.

3. Data and Research Design

3.1 Sample

Our sample starts with 400 firms included in two indexes—CSI SOE 200 and CSI POE 200—for 13 years from 2003 to 2015 based on the index components of 2014. The 200 firms in CSI SOE 200 are the largest 200 state-owned firms among all the public A-share companies listed on the Shanghai or Shenzhen stock exchanges. A firm is defined as a SOE if the ultimate controller is the central or local government, (Note 2) and the government could control the firms via the SASAC, the parent company of the public firms, or other SOEs (Lin & Milhaupt, 2013). The 200 firms in CSI POE 200 are the 200 privately owned firms with the largest market capitalization and liquidity of all the publicly traded A-share companies listed on the Shanghai or Shenzhen stock exchanges. Our sample consists of the largest 200 SOEs and the largest 200 non-SOEs, which are arguably the most important firms in China.

3.2 Politically Connected CEOs and Independent Boards of Directors

We manually gathered information on CEOs from annual financial reports. In China, the key leader in a firm is not necessarily the CEO, but rather the chairman or the president. We define the CEO in our study as the executive who signs the financial reports together with the CFO, no matter what executive position he or she holds. We argue that whoever is responsible for the completeness and accuracy of the financial reports is also a key leader in daily operations. We collected the names of the CEOs from the annual reports as the first step. Then we followed the prior research (Peng, Sun, & Markóczy, 2015) and recorded the NPC/CPPCC information from the Profile of Directors and Senior Managers sections in the annual reports. We defined a politically connected CEO (PCEO) as a dummy variable equal to 1 if the CEO is or was a member of the NPC or CPPCC and equal to 0 otherwise.

We also collected the independent board members' names, background information, and the type (dependent vs. independent) from the annual reports. The type of independent director is clearly documented in the annual report. We defined a politically connected independent board members (PBOD) as a dummy variable equal to 1 if at least one independent director sitting on the board is or was a member of the NPC or CPPCC and equal to 0 otherwise.

We obtained financial-related data and market-related data from Capital IQ. The SOE information was obtained from the China Security Index website. (Note 3) The dummy variable SOE equals 1 if the firm is included in the CSI SOE 200 and equals 0 if the firm is included in the CSI POE 200.

Table 1 describes our data selection procedure. Of the 5,200 (400 firms x 13 years) firm–year observations, 675 went public after the initial sample year of 2003. Among the remaining observations, 898 were missing political connection information on CEOs and/or board members from their annual reports. We then merged the data with finance- and market-related data from Capital IQ. After we deleted cases with missing data, the final sample size consisted of 2,715 firm–year observations when using accrual-based earnings management as the dependent variable. The calculation of real earnings management measures (RM_1 and RM_2) further reduced the sample size due to insufficient data to calculate the two variables. The final sample size when using RM_1 and RM_2 as the dependent variables is 2,094 and 2,090, respectively.

Table 1. Sample Selection

Initial Sample (firm-year observations)	5,200 (a)
Deletions due to missing data for	
Prior IPO	-675
CEO's political connection	-848
Board's political connection	-50
Control variables	-912
Sample size	2,715

(a) CSI SOE 200 firms and CSI POE 200 firms 13 years (2003-2015)

3.3 The Measures of Earnings Management

Earnings management is classified into two categories in the literature: accrual-based earnings management and real earnings management (Cohen, Dey, & Lys, 2008). The key difference between the two is that real earnings management involves real economic actions (e.g., influencing current and/or future cash flows) to manipulate earnings, while accruals-based earnings management uses only accounting accruals to influence reported earnings (e.g., no impact on cash flows; Cohen & Zarowin, 2010; Roychowdhury, 2006). Roychowdhury (2006) identified three metrics of real earnings management: overproduction, abnormal cash flows from operations, and discretionary expenses. We will discuss the accrual-based earnings management and the three metrics of real earnings management in details later.

We follow Cohen and Zarowin (2010) and use a cross-sectional model to measure both accrual-based earnings management and the three metrics of real earnings management, where we estimate the model for each 2-digit industry in each year. We require at least eight observations for each industry and year group to have sufficient data to calculate all four earnings management measures (Cohen & Zarowin, 2010).

3.3.1 Accrual-based Earnings Management (Accrual EM)

We use the following model to estimate normal accruals.

$$\frac{\mathrm{TA}_{i,t}}{\mathrm{Assets}_{i,t-1}} = k_1 \frac{1}{\mathrm{Assets}_{i,t-1}} + k_2 \frac{\Delta\mathrm{Sales}_{i,t}}{\mathrm{Assets}_{i,t-1}} + k_3 \frac{\mathrm{PPE}_{i,t}}{\mathrm{Assets}_{i,t-1}} + \varepsilon_{it} \quad (1)$$

In Equation 1, $TA_{i,t}$ represents total accruals, which is calculated as earnings before extraordinary items and discontinued operations minus operating cash flows; $Assets_{i,t-1}$ represents total assets from the preceding year; $\Delta Sales_{i,t}$ represents changes in revenue calculated as the current year's revenue minus last year's revenue; and $PPE_{i,t}$ is the gross value of property, plants, and equipment. The normal accruals ($NA_{i,t}$) of each firm and year are estimated using Equation 1. Discretionary accruals is the difference between actual accruals and normal accruals, $TA_{i,t}/Asset_{i,t-1} - NA_{i,t}$.

3.3.2 Real Earnings Management

Roychowdhury (2006) discusses in detail the three metrics of real earnings management and their impact on both reported earnings and real economics. Firms could overproduce products to lower the cost of goods sold in the current reporting period, resulting in higher abnormal production costs and higher net income. Lower abnormal cash flows from operations indicate that firms may provide additional discounts and/or more lenient credit terms to temporarily increase sales, thus increasing net income. However, this action may hurt the firm's long-term performance, because the total cash inflows from certain amount of products will be lower due to the additional discount. If firms provide more lenient credit terms, the chance the pay cannot be collected would increase. Lower abnormal discretionary expenses indicate less spending on various items such as advertising expenses, R&D expenses, resulting in higher net income. However, saving advertising or R&D expense is not necessarily helpful for firm performance in the long run. The three metrics are computed following Cohen and Zarowin (2010).

1) Abnormal production costs (APROD)

Normal production costs are estimated using Equation 2 below:

$$\frac{\text{PROD}_{i,t}}{\text{Assets}_{i,t-1}} = k_1 \frac{1}{\text{Assets}_{i,t-1}} + k_2 \frac{\text{Sales}_{i,t}}{\text{Assets}_{i,t-1}} + k_3 \frac{\Delta\text{Sales}_{i,t}}{\text{Assets}_{i,t-1}} + k_4 \frac{\Delta\text{Sales}_{i,t-1}}{\text{Assets}_{i,t-1}} + \varepsilon_{it} \quad (2)$$

In Equation 2, $PROD_{i,t}$ is the sum of the cost of goods sold and the change in inventory in a given year, while all other variables are defined the same as those in Equation 1. The APROD is the difference between the actual and normal production cost, which is estimated using Equation 2.

2) Abnormal cash flow from operations (ACFO)

A normal CFO is estimated using the following equation:

$$\frac{\text{CFO}_{i,t}}{\text{Assets}_{i,t-1}} = k_1 \frac{1}{\text{Assets}_{i,t-1}} + k_2 \frac{\text{Sales}_{i,t}}{\text{Assets}_{i,t-1}} + k_3 \frac{\Delta\text{Sales}_{i,t}}{\text{Assets}_{i,t-1}} + \varepsilon_{it} \quad (3)$$

In Equation 3, $CFO_{i,t}$ denotes cash flow from operations in a given year, and all other variables are defined as above. Abnormal CFO is the difference between the actual and normal CFO as calculated using the estimated coefficients from Equation 3.

3) Abnormal discretionary expenses (DISX)

We model the normal level of discretionary expenses using Equation 4 below:

$$\frac{\text{DISX}_{i,t}}{\text{Assets}_{i,t-1}} = k_1 \frac{1}{\text{Assets}_{i,t-1}} + k_2 \frac{\text{Sales}_{i,t-1}}{\text{Assets}_{i,t-1}} + \varepsilon_{it} \quad (4)$$

In Equation 4, $DISX_{i,t}$ denotes discretionary expenses defined as the sum of advertising expenses, R&D expenses, and sales, general and administrative expenses. The ADISX is the difference between actual and normal discretionary expenses as predicted using Equation 4.

We then follow Cohen and Zarowin (2010) to combine the three metrics into two variables. *RM_1* is the sum of APROD and ADISX multiplied by negative one. Higher RM_1 signals that firms are more likely to overproduce and/or cut discretionary expenses to increase net income. *RM_2* is the sum of ACFO multiplied by negative one and ADISX multiplied by negative one. Higher RM_2 signals that firms are more likely to cut discretionary expenses and/or provide more discounts to increase net income.

3.4 Regression Model

Our sample consists of cross-sectional panel data, and we use the fixed model controlling for industry fixed effects to test our hypotheses. We first include commonly used factors that influence earnings management in the regression model, including firm size (SIZE), return on assets (ROA), financial leverage (LEV), market-to-book ratio (MTB), and auditor (AUDITOR). Because state ownership has been documented to be an important factor that influences Chinese firms' earnings management behaviors, we also add the variable SOE in the regression model. Finally, we introduce the two factors of interest—politically connected CEO (PCEO) and politically connected independent board members (PBOD)—to the regression

model. Formally, the model used to test our two hypotheses is as follows:

$$EM_{it} = \beta_0 + \beta_1 PCEO_{i,t-1} + \beta_2 PBOD_{i,t-1} + \beta_3 SOE_t + \beta_4 SIZE_{i,t-1} + \beta_5 ROA_{i,t-1} + \beta_6 LEV_{i,t-1} + \beta_7 MTB_{i,t-1} + \beta_8 AUDITOR_{i,t-1} + \beta\ Years + \varepsilon \quad (5)$$

Where:

EM: three measures of earnings management, including accrual-based earnings management (Accrual_EM) and two measures of real earnings management (RM_1 and RM_2)

PCEO: a dummy variable that takes the value of 1 if the CEO is or was an NPC or CPPCC member, and 0 otherwise

PBOD: a dummy variable that takes the value of 1 at least one independent director on board is or was an NPC or CPPCC member, and 0 otherwise

SOE: a dummy variable that takes the value of 1 if the company is included in the China Security Index (CSI) State-owned Enterprises 200 (Central SOE 200), and 0 if the company is included in the China Security Index (CSI) Private-owned Enterprises 200 (Central POE 200)

SIZE: the natural logarithm of total assets

ROA: net income in the current year divided by the beginning balance of total assets

LEV: calculated as long-term debt at current year-end divided by book value of equity at current year-end

MTB: calculated as the firm's market value divided by the firm's book value in this year

AUDITOR: a dummy variable that is equal to 1 if the auditor is a big-8 auditor in China as identified by Cheng, Wang, and Wei (2015), and 0 otherwise. Big-8 auditors are consisted of the big 4 international auditing firms (i.e., PwC, E&Y, Deloitte, and KPMG) and the 4 largest Chinese auditing firms, which are RSM China, Shu Lun Pan, Zhejiang Pan-China, and Shine Wing (Cheng, Wang, & Wei, 2015).

Hypothesis 1 predicts a negative relationship between earnings management and the political connections of the CEO while Hypothesis 2 predicts a negative relationship between earnings management and the political connections of independent board members, and negative β_1 and β_2 would support the first two hypotheses.

To test Hypotheses 3 and 4, we introduce the interactions between PCEO and SEO and the interaction between PBOD and SOE into the regression model separately. Hypotheses 3 and 4 predict the effect of PCEO or PBOD will be lower in SOEs than in non-SOEs. A sign of β_2 opposite to β_1 in Equation 6 would support Hypothesis 3. A sign of β_3 opposite to β_2 in Equation 7 would support Hypothesis 4.

$$EM_{it} = \beta_0 + \beta_1 PCEO_{i,t-1} + \beta_2 SOE_t * PCEO_{i,t-1} + \beta_3 SOE_t + \beta_4 PBOD_{i,t-1} + \beta_5 SIZE_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 LEV_{i,t-1} + \beta_8 MTB_{i,t-1} + \beta_9 AUDITOR_{i,t-1} + \beta\ Years + \varepsilon \quad (6)$$

$$EM_{it} = \beta_0 + \beta_1 PCEO_{i,t-1} + \beta_2 PBOD_{i,t-1} + \beta_3 SOE_t * PBOD_{i,t-1} + \beta_4 SOE_t + \beta_5 SIZE_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 LEV_{i,t-1} + \beta_8 MTB_{i,t-1} + \beta_9 AUDITOR_{i,t-1} + \beta\ Years + \varepsilon \quad (7)$$

4. Empirical Results

4.1 Descriptive Statistics

Table 2 reports the summary statistics for the variables. Panel A reports the descriptive statistics for the dependent variables including one measure of accrual-based earnings management (Accrual _EM) and two measures of real earnings management (RM_1 and RM_2). Panel B reports the descriptive statistics for the continuous variables (ROA, MTB, LEV, and SIZE). Panel C presents the descriptive statistics for the discrete variables (PCEO, PBOD, SOE, and AUDITOR).

Panel A indicates that the mean of Accrual_EM is 0.03, while the means of RM_1 and RM_2 are approximately -0.01. These results suggest that Chinese public firms use more accrual-based earnings management than real earnings management. Panel B shows the average ROA of Chinese companies is about 8%, and the MTB ratio is 3.89. The mean LEV of 0.748 suggests a relatively high leverage rate in China.

Panel C presents the descriptive statistics for PCEO, PBOD, SOE, and AUDITOR. Our data show that about 21% of independent board directors had political connections via NPC or CPPCC membership and that about 18% of the CEOs were NPC or CPPCC members, consistent with prior studies (Wu et al., 2012). SOEs and non-SOEs were almost evenly distributed in our sample. Approximately half of the firms in our sample used the big-8 auditors identified by Cheng et al. (2015).

Table 3 presents the Pearson correlation matrix for independent variables. The correlation between RM_1 and RM_2 is around 0.8, this high correlation is because of the overlapped components of the two variables. However, this high correlation would not cause any regression issues because the two variables are different dependent variables and they are used in separate regression models. The correlation between LEV and MTB is high too, and this high correlation is because of the similar calculation method of the two variables. If we drop one of the two from the regression model, the results do not change qualitatively. Therefore, we keep both variables in our regression model. No other correlations are higher than 50%, suggesting no other significant multicollinearity concerns in this study.

Table 2. Summary statistics for dependent and independent variables

Panel A: Dependent Variables

Variables	Mean	Std Dev	25th	50th	75th
Accrual _EM$_{it}$	0.031	0.112	-0.019	0.019	0.070
RM_1$_{it}$	-0.011	0.226	-0.079	-0.001	0.074
RM_2$_{it}$	-0.010	0.154	-0.070	-0.005	0.059

Panel B: Continuous Variables

Variable	Mean	Std Dev	25th	50th	75th
SIZE$_{i,t-1}$	9.379	1.873	8.081	9.056	10.345
ROA$_{i,t-1}$	0.081	0.096	0.026	0.060	0.114
LEV$_{i,t-1}$	0.748	2.376	0.149	0.446	0.924
MTB$_{i,t-1}$	3.888	7.419	1.674	2.736	4.792

Panel C: Discrete variables

Variable	Value	Percent	Value	Percent
PCEO$_{i,t-1}$	1	18.31%	0	81.69%
PBOD$_{i,t-1}$	1	21.73%	0	78.27%
SOE$_i$	1	55.69%	0	44.31%
AUDITOR$_{i,t-1}$	1	45.19%	0	54.81%

Variable definitions

Dependent variable:

Accrual _EM$_{it}$ =Accrual-based earnings management computed following Cohen and Zarowin (2010);

RM_1$_{it}$ =Real earnings management 1 computed following Cohen and Zarowin (2010);

RM_1$_{it}$ =Real earnings management 2 computed following Cohen and Zarowin (2010);

Independent variables:

SIZE$_{it}$ = natural log of market value;

ROA$_{it}$ = ROA calculated as the net income for firm i in year t divided by total assets for firm i in year t-1;

MTB$_{it}$ = Market-to-book ratio calculated as the market value of common equity divided by book value of common equity at end of current year;

LEV$_{it}$ = Leverage calculated as long-term debt at current year-end divided by book value of equity at current year-end;

Discrete variables:

PBOD$_{it}$ = The politically connected independent director is a dummy variable that equals to 1 if at least one independent director on board is or was a member of NPC or CPPCC, and equals to 0 otherwise;

PCEO$_{it}$ = The politically connected CEO is a dummy variable that equals to 1 if the CEO is or was a member of NPC or CPPCC, and equals to 0 otherwise;

SOE$_i$ = SEO is a dummy variable that takes the value of 1 if the firm is included in the CSI SOE 200 index, and takes the value of 0 if the firm is included in the CSI POE 200 index;

AUDITOR$_{it}$ = AUDITOR is a dummy variable which equals to 1 if the auditor is the big-8 auditor in China as identified by Cheng, Wang, and Wei (2015), and 0 otherwise.

Table 3. Correlations

	Accrual _EM$_{it}$	RM_1$_{it}$	RM_2$_{it}$	PCEO$_{i,t-1}$	PBOD$_{i,t-1}$	SOE$_i$	SIZE$_{i,t-1}$	ROA$_{i,t-1}$	LEV$_{i,t-1}$	MTB$_{i,t-1}$
RM_1$_{it}$	-0.192	1.000								
	(0.000)									
RM_2$_{it}$	-0.216	0.807	1.000							
	(0.000)	(0.000)								
PCEO$_{i,t-1}$	0.006	-0.092	-0.075	1.000						
	(0.772)	(0.000)	(0.001)							
PBOD$_{i,t-1}$	-0.026	-0.012	-0.020	0.062	1.000					
	(0.180)	(0.598)	(0.369)	(0.001)						
SOE$_i$	0.051	-0.012	-0.042	-0.030	0.199	1.000				
	(0.008)	(0.594)	(0.057)	(0.115)	(0.000)					
SIZE$_{i,t-1}$	0.004	0.006	0.006	0.129	0.328	0.497	1.000			
	(0.856)	(0.795)	(0.776)	(0.000)	(0.000)	(0.000)				
ROA$_{i,t-1}$	0.432	-0.136	-0.150	-0.020	-0.095	-0.156	-0.239	1.000		
	(0.000)	(0.000)	(0.000)	(0.291)	(0.000)	(0.000)	(0.000)			
LEV$_{i,t-1}$	-0.012	0.042	0.032	-0.001	0.009	0.067	0.103	-0.154	1.000	
	(0.536)	(0.057)	(0.150)	(0.960)	(0.650)	(0.001)	(0.000)	(0.000)		
MTB$_{i,t-1}$	0.131	-0.043	-0.052	-0.033	-0.058	-0.069	-0.180	0.120	0.795	1.000
	(0.000)	(0.050)	(0.019)	(0.083)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	
AUDITOR$_{i,t-1}$	-0.025	-0.031	-0.028	0.035	0.187	0.311	0.437	-0.158	0.041	-0.079
	(0.201)	(0.161)	(0.194)	(0.067)	(0.000)	(0.000)	(0.000)	(0.000)	(0.033)	(0.000)

4.2 Test of Hypotheses 1 and 2

Our test results of Hypotheses 1 and 2 are presented in Table 4. RM_1 is negatively and significantly associated with PCEO, suggesting that firms with politically connected CEOs are engaged in less earnings management through overproduction or reducing discretionary expenses to increase net income. RM_2 is negatively and significantly associated with PCEO, suggesting that firms with politically connected CEOs are less likely to reduce discretionary expenses or use sales discounts to temporarily increase net income. However, the association between accrual-based earnings management and the politically connected CEO is not significant. Taken together, Hypothesis 1 is supported for real earnings management.

The coefficients of PBOD are not significant in all three columns, thus Hypothesis 2 is not supported by our data. However, one possibility that would negate the PBOD's significance is that the impact of a politically connected board member differs in SOEs and non-SOEs; therefore, the two opposite impacts cancel each other. We will explore this possibility in Table 6.

The results of control variables are generally consistent with prior studies. Larger firms are found to be less involved in earnings management, which might be because their reputation cost is higher than that of smaller firms. Firms with higher ROA face less pressure to boost

their earnings. Our results support this notion by finding that real earnings management is negatively associated with ROA. The signs of the coefficients of LEV and MTB are opposite for accrual-based earnings management and real earnings management, which is consistent with the extant literature that the effect of some factors could differ for the two types of earnings management (Wongsunwai, 2013). Big-8 auditors are expected to have higher quality of auditing, and we find that firms using big-8 auditors are less likely to engage in real earnings management.

Table 4. Test of Hypotheses 1 & 2

	Accrual _EM	RM_1	RM_2
$PCEO_{i,t-1}$ (H1)	0.001	**-0.046**	**-0.025**
	(0.21)	**(3.55)*** **	**(2.82)*** **
$PBOD_{i,t-1}$ (H2)	0.001	-0.005	-0.008
	(0.18)	(0.41)	(0.89)
SOE_i	-0.003	0.001	-0.012
	(0.63)	(0.04)	(1.40)
$SIZE_{i,t-1}$	-0.019	-0.015	-0.008
	(9.60)***	(2.69)***	(2.19)**
$ROA_{i,t-1}$	0.019	-0.172	-0.153
	(0.93)	(3.04)***	(3.96)***
$LEV_{i,t-1}$	-0.010	0.032	0.019
	(6.19)***	(6.34)***	(5.52)***
$MTB_{i,t-1}$	0.004	-0.011	-0.007
	(7.57)***	(6.51)***	(5.83)***
$AUDITOR_{i,t-1}$	0.003	-0.022	-0.013
	(0.70)	(1.97)*	(1.75)*
Intercept	0.237	0.145	0.076
	(11.23)***	(2.28)**	(1.76)*
Years	Included	Included	Included
Industries	Included	Included	Included
R^2	0.13	0.05	0.05
N	2,715	2,094	2,090

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

4.3 Test of Hypotheses 3 and 4

We present the test results of Hypothesis 3 in Table 5. The coefficients of the interaction of PCEO and SOE are positive for the two measures of real earnings management, which is opposite to the sign of the PCEO coefficient, supporting Hypothesis 3 that the impact of politically connected CEOs is smaller in SOEs than in non-SOEs. After adding the interaction term of PCEO and SOE, the coefficients of PCEO remain negative and significant when using

RM_1 and RM_2 as dependent variables, suggesting Hypothesis 1 is supported for real earnings management in non-SOEs. In addition, a *t*-test result shows that the sum of the coefficient of PCEO and the interaction of PCEO and SOE are not significantly different from zero, suggesting the support for Hypothesis 1 we found in Table 4 is mainly driven by non-SOEs. The coefficients of PBOD are not significant, consistent with Table 4; thus, Hypothesis 2 is still not supported. Hypotheses 1, 2 and 3 are not supported by our data for accrual-based earnings management.

Table 5. Test of Hypothesis 3

	Accrual _EM	RM_1	RM_2
$PCEO_{i,t-1}$ (H1)	0.000	**-0.091**	**-0.043**
	(0.02)	**(4.76)*** **	**(3.33)*** **
$PCEO_{i,t-1}$ * SOE_i (H3)	0.001	**0.082**	**0.034**
	(0.16)	**(3.20)*** **	**(1.93)***
$PBOD_{i,t-1}$ (H2)	0.001	-0.005	-0.007
	(0.18)	(0.37)	(0.86)
SOE_i	-0.003	-0.015	-0.019
	(0.65)	(1.07)	(1.98)*
$SIZE_{i,t-1}$	-0.019	-0.015	-0.008
	(9.60)***	(2.68)***	(2.18)**
$ROA_{i,t-1}$	0.019	-0.170	-0.152
	(0.93)	(3.01)***	(3.93)***
$LEV_{i,t-1}$	-0.010	0.032	0.019
	(6.19)***	(6.35)***	(5.53)***
$MTB_{i,t-1}$	0.004	-0.011	-0.007
	(7.57)***	(6.51)***	(5.83)***
$AUDITOR_{i,t-1}$	0.003	-0.022	-0.013
	(0.70)	(2.00)**	(1.76)*
Intercept	0.237	0.151	0.078
	(11.22)***	(2.39)**	(1.82)*
Years	Included	Included	Included
Industries	Included	Included	Included
R^2	0.13	0.05	0.05
N	2,715	2,094	2,090

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

We present the test results of Hypothesis 4 in Table 6. The coefficients of PBOD become negative and significant in this model for real earnings management, suggesting that Hypothesis 2 is supported for non-SOEs' real earnings management behaviors. The interaction of PBOD and SOE is positive and significant for real earnings management, which is opposite

to the PBOD coefficient's sign, supporting Hypothesis 4. In addition, a *t*-test result shows that the sum of the coefficient of PBOD and the interaction of PBOD and SOE are not significantly different from zero, suggesting politically connected board members do not have a significant impact on earnings management for SOEs. The coefficients of PCEO are negative and significant, suggesting Hypothesis 1 is still supported. Together, Hypotheses 1, 2, and 4 are partially supported for real earnings management but not supported for accrual-based earnings management.

Table 6. Test of Hypothesis 4

	Accrual _EM	RM_1	RM_2
$PCEO_{i,t-1}$ (H1)	0.001	**-0.044**	**-0.025**
	(0.22)	**(3.44)*** **	**(2.78)*** **
$PBOD_{i,t-1}$ (H2)	-0.000	**-0.037**	**-0.013**
	(0.02)	**(1.68)***	**(1.86)***
$PBOD_{i,t-1}$ * SOE_i (H3)	0.001	**0.047**	**0.008**
	(0.14)	**(1.77)***	**(1.82)***
SOE_i	-0.003	-0.007	-0.014
	(0.64)	(0.50)	(1.46)
$SIZE_{i,t-1}$	-0.019	-0.015	-0.008
	(9.58)***	(2.78)***	(2.21)**
$ROA_{i,t-1}$	0.019	-0.169	-0.152
	(0.93)	(2.99)***	(3.94)***
$LEV_{i,t-1}$	-0.010	0.032	0.019
	(6.18)***	(6.34)***	(5.52)***
$MTB_{i,t-1}$	0.004	-0.011	-0.007
	(7.56)***	(6.51)***	(5.83)***
$AUDITOR_{i,t-1}$	0.003	-0.021	-0.013
	(0.70)	(1.91)**	(1.73)*
Intercept	0.237	0.153	0.077
	(11.19)***	(2.41)**	(1.79)*
Years	Included	Included	Included
Industries	Included	Included	Included
R^2	0.13	0.05	0.05
N	2,715	2,094	2,090

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

The results of control variables in Tables 5 and 6 are consistent with the results in Table 4. For example, real earnings management is negatively associated with ROA across three tables. Firm size is negatively associated with both accrual-based earnings management and real earnings management in all three tables.

5. Discussion and Conclusion

Our study investigates the association between earnings management and politically connected CEOs and also the association between earnings management and politically connected independent board members. We find that firms with politically connected CEOs are engaged in less real earnings management; however, this relationship is weaker in SOEs than non-SOEs. In addition, we find that although politically connected independent board members do not have significant impact on earnings management in general, their presence has a negative relationship on real earnings management in non-SOEs. Our results suggest when firms obtain political connections via CEO or independent board members, these firms' incentives for real earnings management are lower probably due to the easier access to capital market and many other benefits caused by the political connections that reduce the pressure for reporting high net income. SOEs have inherent political connections, and the incremental effect from CEO or independent board members' pollical connections on earnings management is smaller.

We find politically connected CEOs or independent board members do not have significant impact on accrual-based earnings management, suggesting political connections of CEOs or independent directors do not restrict this type of earnings management. The real earnings management is expected to have more serious consequences than accrual-base earnings management because it influences future performance, we speculate firms may hesitate to use real earnings management unless they are out of other choices. One explanation for our finding that the political connections of CEO and independent board members are only significant for real earnings management is that political connections could benefit desperate firms more (e.g., borrowing from banks, acquiring contracts from the government, receiving government bursaries, or even protected by government policies), and thus these political connections prevent firms from using the worse choice of the two types of earnings management- real earnings management.

Our findings could be interpreted as supporting a further benefit of political connections in China. Political connections could serve as a brake for real earnings management. Our study also helps explain the different behaviors of SOEs and non-SOEs in China by finding the impact of political connections on earnings management. However, due to the unique institutional setting in China, it is unclear whether these results could be generalized to other countries or other ownership-type firms.

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Notes

Note 1. http://fanfu.people.com.cn/n/2013/0909/c64371-22852586.html (in Chinese)

Note 2. http://www.csindex.com.cn/sseportal_en/

Note 3. http://www.csindex.com.cn