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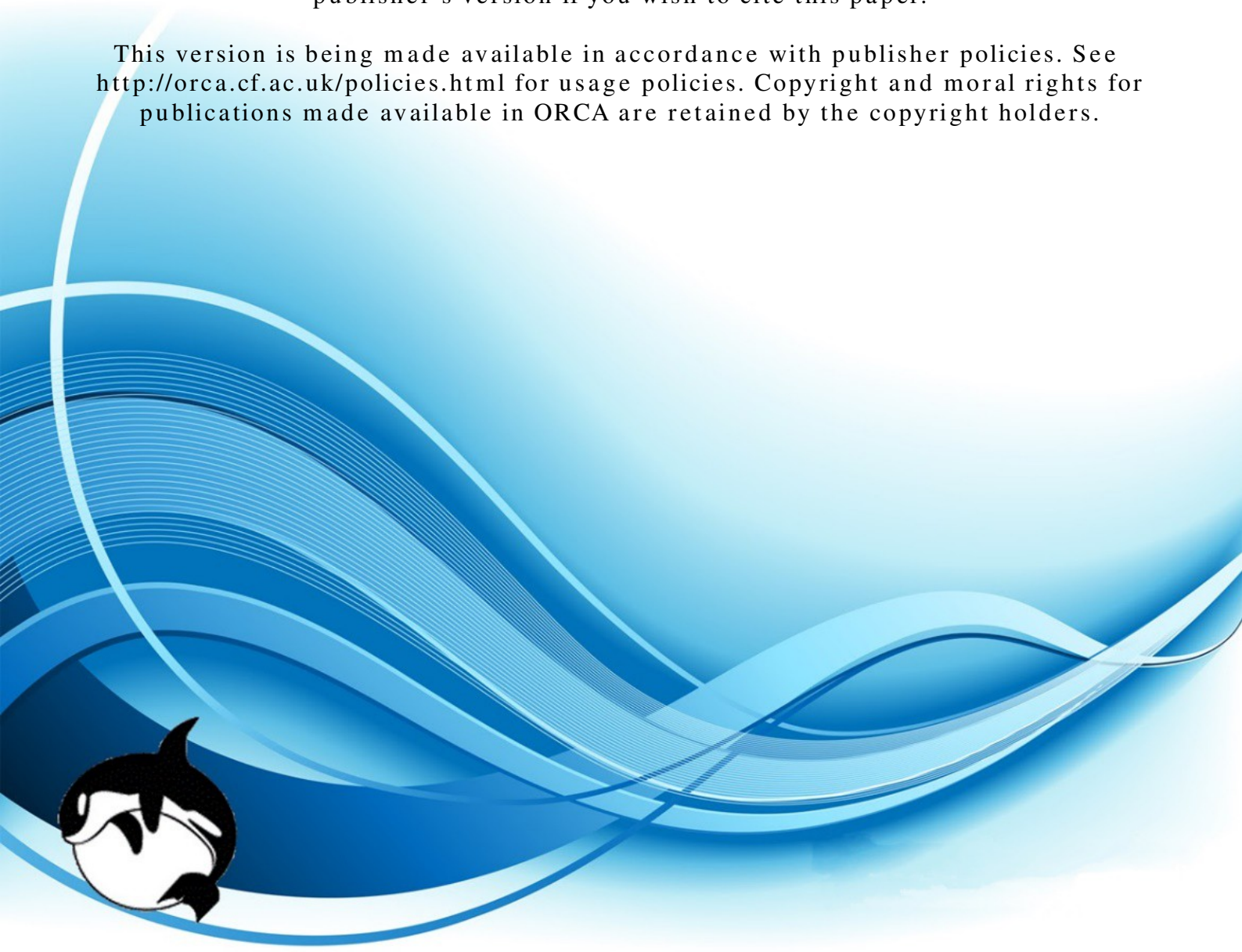

The ethical dimension of management ownership in China

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Abstract: Management ownership has ethical consequences because it has an interest alignment effect or an entrenchment effect. In this paper we investigate the ethical consequences of management ownership in China using accounting conservatism as the direct measure of entrenchment and alignment between shareholders and managers. We argue and find that the ethical effect of management ownership differs significantly in firms with different ultimate controlling shareholders. Specifically, management ownership in non-state-owned enterprises (NSOEs) has an alignment effect while management ownership has less of an alignment effect in state-owned enterprises (SOEs) than in NSOEs. These results show that the ethical consequences of management ownership is moderated by the nature of ultimate controlling ownership.

Keywords: Accounting conservatism; China; Corporate ownership; Ethical dimension; Management ownership

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1. Introduction

Management ownership has ethical consequences. It has long been recognized that increasing management ownership helps align the interests of shareholders and managers and mitigate agency problems between the two parties (Jensen and Meckling, 1976; Demsetz, 1983). It is also possible that managers with high ownership stakes are less likely to be disciplined and, as a result, are more likely to engage in self-interested actions (Holderness and Sheehan, 1991). One way to examine the ethical consequences of management ownership is to investigate its effect on firm performance or firm value. The extant literature documents that management ownership plays a corporate governance role and thus is an important determinant of corporate performance (Morck et al., 1988; Hermalin and Weisbach, 1991; McConnell and Servaes, 1990; Mehran, 1995; Holderness et al., 1999). Some studies find that management ownership has a positive effect on firm performance and this is interpreted as evidence of the alignment effect (Mehran, 1995; Holthausen and Larcker, 1996; Core and Larcker, 2002). Other studies find that it has a negative impact on firm performance and this is considered to be evidence of an entrenchment effect (Morck et al., 1988; McConnell and Servaes, 1990; Hermalin and Weisbach, 1991; Lasfer, 2006). However, as there are many determinants of corporate performance, it is difficult to establish a direct causal relation between management ownership and corporate performance. At the same time, prior studies usually neglect the effect of ultimate ownership on the role of managerial ownership. Since different ultimate owners have different objectives, managerial appointment mechanisms and monitoring powers and wills, management ownership should play different roles.

This paper aims to examine the ethical consequences of management ownership measured by accounting conservatism while taking into account the ownership

structure. Compared with corporate performance, accounting conservatism is a more direct measure of interest conflicts and alignment between shareholders and managers (Holthausen and Watts, 2001; Watts, 2003; Ball and Shivakumar, 2005; Goh and Li, 2011). Accounting conservatism helps avoid the firm's managers receiving large bonuses by providing biased upward estimates of future cash flows, which creates deadweight losses and reduces firm value. It thus helps reduce the likelihood that managers will overstate net assets and cumulative earnings to transfer wealth to themselves rather than managing the firm in an optimal manner (Watts, 2003). As a consequence, it can facilitate efficient contracting between managers and shareholders in the presence of agency problems and help reduce agency costs (Watts, 2003; Ahmed and Duellman, 2007; LaFond and Roychowdhury, 2008; Shuto and Takada, 2010).

The co-existence of SOEs and NSOEs makes China an excellent setting for us to examine the ethical consequences of management ownership. As will be discussed in detail in Section 2.2., controlling shareholders in NSOEs aim to maximize profit while those in SOEs have social, political as well as economic objectives which often are conflicting. Furthermore, management ownership stakes in NSOEs are usually held for a long period, while SOE managers are appointed by the government, and their tenure is often shorter than that of their NSOE counterparts. Additionally, NSOEs are subject to stringent monitoring by their shareholders, while SOEs face weaker monitoring than do NSOEs. These differences between SOEs and NSOEs are expected to affect the role of management ownership.

We find that an increase in management ownership reduces the level of accounting conservatism in NSOEs, thus indicating that management ownership has an interest alignment effect. In contrast, among SOEs, the impact of management

ownership on accounting conservatism is weaker than that in NSOEs and the relation between management ownership and accounting conservatism is insignificant.This finding shows that management ownership has less of an alignment effect in SOEs than in NSOEs.

Our study makes a number of contributions to the literature. First, the paper to our knowledge is the first to use a direct measure to examine the role of management ownership and thus it helps improve the reliability of the research findings in this literature. Second, this paper is also the first to study the role of management ownership from the perspective of ownership structure and finds that management ownership has different roles in different types of firms (SOEs and NSOEs). This helps enrich the literature on the role of managerial ownership. Finally, while existing studies on the role of management ownership are mainly situated in developed economies, the findings of this study are important for understanding the role of management ownership in developing and emerging economies.

The remainder of this paper is organized as follows. Section 2 formulates our hypothesis and is followed by an overview of our research design in Section 3. Our sample and data are described in Section 4, and Section 5 tests our hypothesis and analyzes the results. Section 6 provides further robustness checks. The final section concludes the paper.

2. Hypothesis development

2.1. Management ownership and agency problem

Traditional agency theory suggests that greater management ownership generates a greater alignment of interests between shareholders and managers (Jensen and Meckling, 1976). This interest alignment effect argument predicts that managers with

larger ownership stakes will have stronger incentives to act in line with outside shareholders' interests. This is because managers with high ownership stakes are likely to have longer horizons and more human capital tied to the firm. Thus, under the interest alignment effect, managers have greater incentives to enhance the value of the firm's shares as management ownership increases. In support of the argument that higher managerial equity ownership better aligns the interests of managers and shareholders, Mehran (1995) finds that firm performance, as proxied by Tobin's Q and return on assets, is positively related to the percentage of equity held by managers. Holthausen and Larcker (1996) and Core and Larcker (2002) also document increases in both management ownership and firm performance.

Management ownership may also have an entrenchment effect, such that managers with greater control of the firm have more scope to behave opportunistically (Morck et al., 1988). The more shares a manager holds, the less power the other owners of the company have to influence the manager's decisions. This allows managers to make specific investments that complement their own skills and strengthen their bargaining power, making it difficult to replace them (Shleifer and Vishny, 1989). When the proportion of management ownership increases, managers have more voting rights and greater influence enabling them to pursue their own interests. Moreover, the larger the proportion, the less likely the company will be taken over, and thus the lower the pressure exerted by market control on managers. However，most studies in this line examine different ownership levels and produce inconsistent results. McConnell and Servaes (1990) examine a large data set and find evidence consistent with the management entrenchment argument only when inside ownership exceeds 40% of the firm. Lasfer (2006) also finds that high management ownership entrenches managers by allowing the CEO to create a board that is unlikely

to monitor. Other studies using small samples such as those of Morck et al. (1988) and Hermalin and Weisbach (1991) show that low levels of management ownership appear to be associated with managerial entrenchment. Crucially, recent studies find no evidence that management ownership is associated with greater entrenchment after controlling for the endogeneity between management ownership and the investment opportunity set (LaFond and Roychowdhury, 2008).Fahlenbrach and Stulz (2009) find that a large increase in management ownership increases Tobin's Q and there is no evidence that a large decrease in management ownership has an adverse impact on firm value. Based on a sample of the 460 largest UK listed companies, Conyon and Florou (2002) indicate that there is no evidence of managerial entrenchment at a high level of executive ownership. By examining a sample of Chinese firms, Hu and Zhou (2008) provide evidence that the interest alignment effect operates in China. Overall, evidence supporting the interest alignment effect is stronger than that demonstrating the entrenchment effect.

2.2. The effect of ultimate ownership on the role of management ownership

The interest alignment effect operates in Chinese NSOEs because management ownership in NSOEs is more likely to produce the interest alignment effect which reduces agency costs. The most important reason for this intuition is that both shareholders and managers care about economic outcomes, the prerequisite for the existence of aligned economic interests. As management ownership increases, the economic interests of shareholders and managers in NSOEs tend to become more closely aligned.

Furthermore, because management ownership in NSOEs is usually held for a long period of time, such firms provide a favorable setting for management ownership to realize the interest alignment effect. There are three main types of management

ownership in Chinese NSOEs. In the first type, managers are founders or their family members in NSOEs which started as small enterprises originally controlled or solely owned by the managers (Hu and Zhou, 2008). Among all firms listed on China's Small and Medium-Sized Enterprise Trading Market in 2011, about 40% were family firms before their initial public offering (IPO) and 60% had a family member as their CEO (Xu and Ning, 2011). Such managers have more long-term human capital tied to the firm. They tend to be long-term shareholders or to pass their shares on to their descendants (Anderson and Reeb, 2003). The second type of management ownership is found among managers who obtain their ownership rights in the IPO process. In the last two decades, many SOEs have been privatized by issuing shares on the stock market (Sun and Tong, 2003) or through control-right transfers (Chen et al., 2008). The managers of a firm that was once an SOE could become important shareholders when the company was privatized through the sale of some or all of its shares to legal persons or individual investors including its managers (Hu and Zhou, 2008). The third type of management ownership arises when managers become shareholders through restricted share or share option plans if their tenure at the firm has been sufficiently long. By the end of 2010, 51 NSOEs had stock or stock option incentive plans, and their managers had already held their position for an average of 4.45 years when the incentive plan was adopted,[2] indicating that NSOE ownership by managers has a positive relationship with their tenure. Managers can accumulate significant equity stakes via these routes, even where they are not part of the founding family.

Another factor to consider in this context is that NSOEs in China are subject to stringent monitoring by their shareholders, which should reduce the entrenchment effect that increasing management ownership could bring about. As the equity

[2] The data were manually collected from http://www.cninfo.com.cn/, the information disclosure website authorized by the China Securities Regulatory Commission.

ownership of NSOEs is concentrated in founders' families (e.g., Claessens and Lang, 2000; Claessens et al., 2002), the agency problem is alleviated by controlling owners' close monitoring. Large shareholders have strong incentives to put pressure on managers to run the firm properly because this is likely to increase their wealth (Claessens et al., 2002). Evidence from China's listed firms indicates that ownership concentration is associated with a stronger turnover-performance link when the largest owner is private (Kato and Long, 2006). As Shleifer and Vishny (1997) point out, large shareholders address the agency problem in such a way that they have both a general interest in profit maximization and sufficient control over firm assets to have their interests upheld.

NSOE managers in China are also monitored by the managerial labor market. Many NSOE managers who are not founders or their family members come from and go back to this market. Their career concerns ensure that they have a keen interest in their firm's performance. For example, CEO turnover in Chinese NSOEs is found to be sensitive to stock returns (Kato and Long, 2006). Moreover, NSOEs face substantial financial constraints which are one of the most serious barriers to their growth. Managerial expropriation from the firm will worsen the firm's financial situation, potentially putting it in a distressed state, resulting in management turnover. Market monitoring checks the tendency for increasing management ownership to lead to greater managerial expropriation.

In sum, the common concern for economic objectives among shareholders and managers of NSOEs and the long-term nature of management stakes reinforce the interest alignment effect of managerial ownership. In addition, monitoring by the controlling shareholders of NSOEs and the managerial labor market limits the entrenchment effect of managerial ownership. To the extent that these forces combine

to produce a net interest alignment effect of management ownership, we expect management ownership to have a substitutive effect on accounting conservatism in NSOEs.

The presence of controlling state ownership changes the relative magnitude of the interest alignment and entrenchment effects of management ownership for several reasons. First, SOEs' multiple goals reduce the likelihood of management ownership aligning the interests of managers and shareholders. During the transition to a market-based economy, maintaining employment levels and providing social security to the unemployed are important to maintaining social stability. Due to the lack of independent social security institutions and the fact that firms with strong profit incentives are not interested in promoting social stability, SOEs in China are required to continue to play a role in providing social welfare. Because most SOE managers are current or former government bureaucrats, decisions concerning their promotion and compensation depend more on adherence to SOEs' various political and social objectives than on the firm's operating and financial performance (Fan et al., 2007). These political and social objectives usually conflict with the firm's economic performance. However, this does not deter SOEs from granting shares to their managers; for example, managers could obtain stock options by meeting a very low performance threshold which reduces their incentive role and turns them into a form of managerial welfare (Lu et al., 2009). This means that increasing management ownership is less likely to produce the interest alignment effect in SOEs than in NSOEs.

In addition, the interest alignment effect of management ownership usually requires that equity stakes are held over a long horizon. However, the period of management ownership in SOEs is usually short. The main reason for this is that most

managers are appointed for a short period and their human capital and reputation are thus less associated with the firms they serve. SOE managers are often bureaucrats and are ultimately appointed by the government, meaning that they frequently change jobs between government and SOEs or among SOEs in accordance with government assignments. Indeed, their average tenure is only 2.88 years (Liu and Liu, 2007). As a result, they do not have strong incentives to hold long term stock positions in the firms they serve. Furthermore, their job shifts among companies and between government and SOEs allow them to dispose of their stock holdings, because although the Company Law stipulates that they cannot transfer more than 25% of their shares during their term of office, they can dispose of all their shares six months after leaving their job. In other words, while SOE managers must keep most of their shares for a short period, they do not have incentives to hold shares for long. The result is that management ownership does not have the desired interest alignment effect.

Third, the monitoring of SOEs is often weak because it is more difficult to monitor their managers than it is to oversee their private sector counterparts. Due to the difficulties in distinguishing between policy-induced losses and non-policy-induced losses, managers of SOEs can ascribe all their losses to state policies (Lin et al., 1998). In addition, the inherent features of SOEs make the monitoring of their managers weak. As Chinese SOEs belong to all Chinese citizens, government units responsible for the management of state-owned assets are agents with little incentive to monitor the behavior of SOE management. Moreover, because state and legal person shares of listed Chinese firms held directly or indirectly by the government are not tradable,[3] any transfer of these stocks must be approved by

[3] This has been reformed since 2005 and as a result these shares can be traded publicly once the restrictions agreed upon by different types of shareholders are lifted up.

numerous government agencies including both the China Securities Regulatory Commission and the Ministry of Finance. Hence, the disciplinary effect of market takeovers on managers is weakened considerably. Therefore, when ultimate control is in the hands of the state, the multiple objectives of SOEs and the short duration of their managers' shareholdings combine to make the interest alignment effect of management ownership weaker than in NSOEs. Meanwhile, the entrenchment effect of management ownership of SOEs is compounded by weak or non-existent monitoring.

In sum, the nature of ultimate controlling ownership could decrease the alignment effect of management ownership and increase the entrenchment effect of management ownership. Combined these two effects together, we have the following hypothesis:

Management ownership has less of an alignment effect (or a greater entrenchment effect) in SOEs than in NSOEs.

3. Research design

We use accounting conservatism as the direct measure of the interest conflict and alignment between management and shareholders. We measure accounting conservatism using Basu's (1997) earnings-return model as follows:

$$NI_{i,t} = \beta_0 + \beta_1 NEG_{i,t} + \beta_2 RET_{i,t} + \beta_3 NEG_{i,t} * RET_{i,t} + \varepsilon_{i,t} \ , \qquad (1)$$

where:

$NI_{i,t}$= annual income before extraordinary items of firm i in year t, scaled by the market value of equity at the end of year t-1;

$RET_{i,t}$=market-adjusted buy-and-hold annual returns of firm i from May of year t to April of year t+1;

$NEG_{i,t}$= indicator variable equal to 1 if $RET_{i,t}$is negative, and 0 otherwise.

In Equation (1), β_2 captures the timeliness of earnings with respect to good news, and β_3 captures asymmetric timeliness with respect to bad news versus good news and hence is the measure of conservatism. A positive β_3 indicates that earnings are conservative and there is an alignment between managers and shareholders； the higher the value of β_3， the higher the alignment. In contrast, a negative β_3 implies optimistic earnings, which means an entrenchment between managers and shareholders； the higher the value of β_3， the larger the entrenchment.

We expand Equation (1) into the following model to test the above hypothesis:

$$\begin{aligned} NI_{i,t} = {} & \beta_0 + \beta_1 NEG_{i,t} + \beta_2 RET_{i,t} + \beta_3 NEG_{i,t} * RET_{i,t} + \beta_4 SOE_{i,t} + \beta_5 SOE_{i,t} * NEG_{i,t} \\ & + \beta_6 SOE_{i,t} * RET_{i,t} + \beta_7 SOE_{i,t} * NEG_{i,t} * RET_{i,t} + \beta_8 OWN_{i,t-1} + \beta_9 OWN_{i,t-1} * NEG_{i,t} \\ & + \beta_{10} OWN_{i,t-1} * RET_{i,t} + \beta_{11} OWN_{i,t-1} * NEG_{i,t} * RET_{i,t} + \beta_{12} SOE_{i,t} * OWN_{i,t-1} * NEG_{i,t} * RET_{i,t} \\ & + CONTROLS + CONTROLS * NEG_{i,t} + CONTROLS * RET_{i,t} + Year + \varepsilon_{i,t} \end{aligned} \quad (2)$$

Where *SOE* is a dummy variable that equals 1 if the firm is an SOE and 0 if it is not an SOE. We classify firms into SOEs and NSOEs based on their ultimate controlling shareholders. SOEs are defined as firms directly or indirectly owned or controlled by State-owned Assets Supervision and Administration Commission or other state-owned enterprises controlled by the central government or local governments. NSOEs are defined as firms controlled by private investors. β_3 indicates the level of accounting conservatism for NSOEs. β_7 measures the difference in the level of conservatism between SOEs and NSOEs. $\beta_3 + \beta_7$ indicates the level of accounting conservatism for SOEs. *OWN* is equal to the percentage of shares held by all directors at the beginning of the fiscal year. β_{11} measures the relationship between management ownership and accounting conservatism in NSOEs, whereas β_{12} indicates the

difference in the relationship between SOEs and NSOEs. $\beta_{11}+\beta_{12}$ shows the relationship between management ownership and accounting conservatism in SOEs. According to our hypothesis， management ownership has less an alignment effect (or a greater entrenchment effect) in SOEs than in NSOEs. Thus, we expect β_{12} to be significantly positive.

Following prior studies (e.g., LaFond and Roychowdhury, 2008; LaFond and Watts, 2008), we control for firm characteristics that are considered to be related to accounting conservatism in the Basu's (1997) model. These variables include firm size, leverage and the market-to-book ratio. We measure firm size (*Size*) by the natural logarithm of the book value of total assets, firm leverage (*Lev*) by the book value of total debt divided by the book value of total assets, and the market-to-book ratio (*MB*) by the market value of the firm's assets over the book value of its assets.

4. Sample selection and descriptive statistics

Our initial sample consists of all firms listed on the Shanghai and Shenzhen Stock Exchanges between 2001 and 2009 that are included in the China Securities Markets and Accounting Research (CSMAR) database. Our sample period starts from 2001 because China's admission to the World Trade Organization triggered a new set of accounting rules that took effect in that year. Financial statements data and share price data necessary for the study are available from the CSMAR database. We delete banks, securities firms and insurance companies because they adopt different accounting standards. To ensure the results are not sensitive to extreme values, observations in the top and bottom 1% of the sample by annual income (*NI*) and return (*RET*) are

eliminated.[4] The selection process yields 10,944 firm-year observations. Panel A of Table 1 reports the yearly distribution of sample firms. It can be seen that the annual number of observations generally increases over time, rising from 1,006 in 2001 to 1,441 in 2009.This is consistent with the developing nature of China's share market. The number of SOEs in our sample increases slightly (from 819 to 873) over the period, while the number of NSOEs increases considerably (from 187 to 568). This is consistent with the pattern of the IPO market in China, where NSOEs went public in recent years. Panel B of Table 1 details the distribution of all sample firms across various industries. The industry composition of our sample is similar to that of the population of firms in the CSMAR database. The most heavily represented industry is manufacturing (57.37% of the whole sample).

Insert Table 1 Here

Table 2 reports descriptive statistics for our sample firms. Panel A summarizes descriptive statistics on the full sample for the variables used in the regression analyses. The average (median) percentage of management ownership (*OWN*) is 1.457% (0.003%). The mean (median) *NI* in our sample is 1.6% (1.7%). The mean market-adjusted buy-and-hold annual return of the firm (*RET*) is -3.8%, while *NEG* has a mean value of 62%. This indicates that 62% of listed Chinese firms have a *RET* lower than the average market return. The median *RET* of -7.1% is consistent with statistics reported in earlier studies (e.g., Kato and Long, 2006).

Panels B and C of Table 2 report descriptive statistics for SOEs and NSOEs, respectively. In these SOEs, the proportion of shares held by board members has a mean value of 0.102% and a median value of 0.002%. Although these figures are consistent with the results of Wei et al. (2005), they are far lower than the mean

[4] We also winsorize observations in the top and bottom 1% of annual income (*NI*) and return (*RET*) observations as a robustness check; the results are the same.

(4.51%) and median (0.004%) ownership shares held by their NSOE counterparts. The mean (median) *NI* in our sample is 1.7% (1.8%) for SOEs and 1.2% (1.7%) for NSOEs.[5] Note that the left skew of the NSOE *NI* distribution is consistent with accounting conservatism. Panel D of Table 2 reports differences between SOEs and NSOEs. Relative to NSOEs, SOEs are larger (*SIZE*) and more profitable (*NI*), but have lower management ownership (*OWN*), lower investment opportunity (*MB*) and lower leverage (*LEV*).

Insert Table 2 Here

Table 3 presents the correlation matrix of the variables used in estimating our models. The upper diagonal of the table reports Pearson correlations, while the lower diagonal presents Spearman correlations. The Pearson correlations reveal that *NI* is positively correlated with *RET* (0.067) and negatively correlated with *NEG* (–0.135). This indicates that reported earnings reflect at least a portion of the information reflected in returns, consistent with findings in prior studies (Basu, 1997; Ball et al., 2000; LaFond and Roychowdhury, 2008).

Insert Table 3 Here

5. Empirical results

We estimate Equation (2) using pooled OLS regressions to test our hypothesis. We follow LaFond and Roychowdhury (2008) by using scaled decile ranks for all variables except *NI, RET* and *NEG*. To compute the scaled decile ranks, we first rank observations by year into 10 groups from 0 to 9, then divide each group value by 9 so the rank variable ranges from 0 to 1.

Table 4 reports the regression results. In Model (1) of Table 4, the coefficient of *NEG*RET*(β_3) is 0.018, significant at the 1% level, which indicates that listed

[5] We control for the effect of this ownership difference on our regression results in the section of robustness checks.

Chinese companies as a whole adopt a conservative accounting approach. The coefficient of *OWN*NEG*RET*(β_{11}) is not significantly different from zero, suggesting that there is no significant relationship between management ownership and accounting conservatism for all listed companies. This indicates that overall management ownership does not have an alignment effect, nor an entrenchment effect. When we include the dummy variable for state ownership in Model (2) of Table 4, the coefficient of *NEG*RET*(β_3) is still significantly positive, but the coefficient of *SOE*NEG*RET*(β_7) is significantly negative, showing accounting conservatism in SOEs is weaker than that in NSOEs. The coefficient β_{11} of *OWN*NEG*RET* is -0.022, significant at the 5% level, indicating management ownership is negatively related to accounting conservatism in NSOEs，that is, management ownership has played an alignment role in NSOEs. The coefficient β_{12} of the interaction term *SOE*OWN*NEG*RET* is 0.023, significant at the 1% level, suggesting that management ownership have less of an alignment effect (or a greater entrenchment effect) of ownership in SOEs than in NSOEs. However, the coefficient $\beta_{11}+\beta_{12}$ designed to measure the relation between management ownership and accounting conservatism in SOEs is insignificantly different from zero. This shows that SOEs' management ownership does not produce either an alignment effect or an entrenchment effect.

Insert Table 4 Here

In Model (3) of Table 4, we add the control variables *MB*, *LEV* and *SIZE* to control for their potential effects on accounting conservatism. We also add interaction terms between these control variables and *NEG*, *RET*. The regression results are unchanged.

Furthermore, we divide the sample into two sub-samples — one for SOEs and the other for NSOEs —and run regressions for them separately. The results for SOEs and NSOEs are reported as Models (4) and (5), respectively. The β_{11} values in the two models reveal that although the association between management ownership and accounting conservatism is significantly negative in NSOEs, it is insignificant in SOEs. These results are consistent with those of Models (2) and (3) and provide further support for our hypothesis.

6. Robustness checks

We have used Basu's (1997) earnings-return model to measure conservatism in the above analysis. Here, we test the robustness of our results to another commonly used measure of conditional conservatism that does not rely on share returns: the earnings-change model (Basu, 1997; Ball and Shivakumar, 2005).[6]

$$\Delta NI_t = \beta_0 + \beta_1 NEG_{i,t} + \beta_2 \Delta NI_{t-1} + \beta_3 NEG_{i,t} * \Delta NI_{t-1} + \varepsilon_{i,t} \quad (3)$$

where:

ΔNI = change in annual income before extraordinary items from year t-1 to t scaled by total assets at the end of year t-1;

NEG=an indicator variable equal to 1 if ΔNI is negative, and 0 otherwise;

Specifically, similar to Equation (2), we extend the basic earnings-change model as follows:

$$\begin{aligned}\Delta NI_t = {} & \beta_0 + \beta_1 NEG_{i,t} + \beta_2 \Delta NI_{t-1} + \beta_3 NEG_{i,t} * \Delta NI_{t-1} + \beta_4 SOE_{i,t} + \beta_5 SOE_{i,t} * NEG_{i,t} \\ & + \beta_6 SOE_{i,t} * \Delta NI_{t-1} + \beta_7 SOE_{i,t} * NEG_{i,t} * \Delta NI_{t-1} + \beta_8 OWN_{i,t-1} + \beta_9 OWN_{i,t-1} * NEG_{i,t} \\ & + \beta_{10} OWN_{i,t-1} * \Delta NI_{t-1} + \beta_{11} OWN_{i,t-1} * NEG_{i,t} * \Delta NI_{t-1} + \beta_{12} SOE_{i,t} * OWN_{i,t-1} * NEG_{i,t} * \Delta NI_{t-1} \\ & + CONTROLS + CONTROLS * NEG_{i,t} + CONTROLS * \Delta NI_{t-1} + Year + \varepsilon_{i,t}\end{aligned} \quad (4)$$

Where SOE, OWN and the control variables are defined in the same manner as in

[6] Other studies that use this model include those of Nichols et al. (2008), Chung and Wynn (2008), and Goh and Li (2011).

Equation (2).

Basu (1997) shows that conservatism results in lower earnings persistence in bad news periods than it does in good news periods. In Equation (4), the coefficient on $NEG^{*}\Delta NI$ is consistent with timely loss recognition, so β_3 should be negative. Because β_{11} measures the relation between management ownership and conservatism in NSOEs, $\beta_{11} > 0$ indicates that NSOEs' management ownership has an alignment effect. β_{12} uses NSOEs as the reference group to measure the incremental effect of management ownership in SOEs. Table 5 reports the results of estimating Equation (4). In Model (2) of Table 5, which includes the control variables *MB*, *LEV* and *SIZE*, the coefficient β_{11} is 0.464, significant at the 1% level, the coefficient β_{12} is -0.289, significant at the 5% level, and $\beta_{11}+\beta_{12}$ is insignificantly different from zero. These results also provide evidence in support of our hypothesis. Model (3) in Table 5, which also includes the interaction terms between the control variables and *NEG*, ΔNI_{t-1}, generates results similar to those derived from Model (2). When we run separate regressions for the SOE and NSOE subsamples as shown in Models (4) and (5), we obtain results similar to those reported in Table 4.

Insert Table 5 Here

Table 2 shows that the level of management ownership in SOEs is significantly lower than that in NSOEs. To control for the effect of this ownership difference on our findings, we rerun Equation (2) using a matching sample. We start with NSOEs with management ownership and then find matching SOEs with the closest level of management ownership in the same industry and same year. This process generates a sample of 3,104 observations, half SOEs and half NSOEs. The resultant level of management ownership is not significantly different between the two subsamples. We

re-run Model (1) using the matching sample and the results are unchanged.

The foregoing analysis is based on the sample formed by removing observations in the top and bottom 1% for annual income (*NI*) and return (*RET*). The results do not change when we winsorizethe observations in the top and bottom 1% for annual income (*NI*) and return (*RET*) as an alternative. We have followed LaFond and Roychowdhury (2008) by using scaled decile ranks for management ownership in the above analysis. Our results are robust to the use of the raw proportion of management ownership.

The investment opportunity set (IOS) is a common factor that affects both management ownership and the accounting conservatism. Himmelberg et al. (1999) model enables us to decompose total management ownership into a predicted component conditional on explanatory variables that primarily proxy for the firm's IOS, and an unexpected component (*UNEXP_OWN*). Our results are robust to controlling for the IOS.

7. Conclusion

In this paper we have examined how corporate ownership affects the ethical consequences of management ownership using accounting conservatism as the direct measure of entrenchment and alignment between shareholders and managers. Our results show that in NSOEs, management ownership has an alignment effect. In contrast, it has less of an alignment effect in SOEs than in NSOEs; in actuality, SOEs' management ownership does not produce either an alignment effect or entrenchment effect. These results indicate that the governance role of management ownership is moderated by the nature of ultimate controlling ownership. An important policy implication of our findings is that management ownership is an effective governance

mechanism in NSOEs, but not so in SOEs. The main reason is that the differences in ownership nature mean that the two types of firms have different objectives.

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Table 1

Sample Distribution

Panel A: Distribution by year

	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Total	1,006	1,072	1,130	1,192	1,270	1,222	1,268	1,343	1,441	10,944
SOEs	819	830	839	845	888	820	818	848	873	7,580
NSOEs	187	242	291	347	382	402	450	495	568	3,364

Panel B: Distribution by industry

	No. of firm-years	% of Sample
Agriculture, forestry and fishing	243	2.22
Mining	170	1.56
Manufacturing	6,279	57.37
Utilities	473	4.32
Construction	222	2.03
Transportation	456	4.17
Information and technology	658	6.01
Wholesale trade	722	6.60
Real estate	499	4.56
Services	343	3.13
Entertainment	82	0.75
Conglomerates	797	7.28
Total	10,944	100.00

Notes

SOEs are defined as those firms directly or indirectly owned or controlled by State-owned Assets Supervision and Administration Commission or other state-owned enterprises controlled by the central government or local governments. NSOEs are defined as those firms controlled by private investors.

Table 2
Descriptive statistics

	Mean	Median	Standard Deviation	Minimum	Maximum
Panel A: Full sample (n=10,944)					
OWN%	1.457	0.003	7.507	0.000	74.805
NI	0.016	0.017	0.062	-1.122	0.375
RET	-0.038	-0.071	0.533	-2.198	5.173
NEG	0.620	1.000	0.485	0.000	1.000
MB	1.475	1.241	0.856	0.176	33.083
LEV	0.507	0.485	0.404	0.008	16.329
SIZE	21.215	21.105	1.051	16.831	27.809
Panel B: SOE sample (n=7,580)					
OWN%	0.102	0.002	0.011	0.000	31.792
NI	0.017	0.018	0.057	-0.721	0.374
RET	-0.043	-0.068	0.519	-2.198	5.173
NEG	0.620	1.000	0.485	0.000	1.000
MB	1.416	1.223	0.656	0.176	12.382
LEV	0.489	0.482	0.281	0.008	8.502
SIZE	21.384	21.245	1.062	17.318	27.809
Panel C: NSOE sample (n=3,364)					
OWN%	4.510	0.004	12.938	0.000	74.805
NI	0.012	0.017	0.071	-1.122	0.364
RET	-0.029	-0.078	0.565	-2.174	4.734
NEG	0.620	1.000	0.485	0.000	1.000
MB	1.608	1.288	1.179	0.477	33.083
LEV	0.546	0.496	0.592	0.009	16.329
SIZE	20.836	20.802	0.916	16.831	24.757

Panel D: Difference between SOE and NSOE samples	Mean diff	T-test	Median diff	Wilcoxon sign rank test
OWN%	- 4.408	- 19.73***	- 0.002	9.841***
NI	0.005	3.97***	0.001	-2.606***
RET	- 0.015	- 1.28	0.010	-1.134
NEG	0.000	0.02	0.000	-0.022
MB	- 0.192	- 8.86***	- 0.065	9.488***
LEV	- 0.056	- 5.26***	- 0.014	2.685***
SIZE	0.547	27.42***	0.443	-24.733***

Notes
OWN is the percentage of management ownership to total equity shares. *NI* is annual income before extraordinary items scaled by beginning of fiscal year market value of equity. *RET* is market-adjusted buy-and-hold annual returns from May of year t to April of year t+1; *NEG* is an indicator variable equal to 1 if *RET* is negative, and 0 otherwise. *MB* is the market-to-book ratio at the beginning of the fiscal year; *LEV* is equal to total debt divided by total assets at the beginning of the fiscal year; *SIZE* is equal to natural log of total assets at the beginning of the fiscal year. SOEs are defined as those firms directly or indirectly owned or controlled by State-owned Assets Supervision and Administration Commission or other state-owned enterprises controlled by the central government or local governments. NSOEs are defined as those firms controlled by private investors.
***: Significant at the 1% level; **: significant at the 5% level; *: significant at the 10% level.

Table 3
Correlation matrix

	OWN	*SOE*	*NI*	*RET*	*NEG*	*MB*	*LEV*	*SIZE*
OWN		-0.271***	0.036***	0.006	-0.032***	0.030***	-0.060***	-0.100***
SOE	-0.094***		0.041***	-0.013	0.001	-0.104***	-0.064***	0.240***
NI	0.013	0.025***		0.067***	-0.135***	-0.068***	-0.093***	0.198***
RET	0.051***	0.011	0.136***		-0.593***	-0.016*	0.024***	-0.050***
NEG	-0.025**	0.001	-0.187***	-0.841***		0.025***	0.011	0.009
MB	0.073***	-0.091***	-0.310***	0.034***	0.030***		0.192***	-0.332***
LEV	-0.062***	-0.026***	-0.056***	-0.033**	0.016*	-0.219***		-0.057***
SIZE	0.024***	0.236***	0.317***	-0.036**	-0.006***	-0.442***	0.205***	

Notes
Pearson (Spearman) correlations are at the upper (lower) diagonal. *OWN* is the percentage of shares held by all directors at the beginning of the fiscal year. *SOE* is a dummy variable that equals 1 if the firm is an SOE and 0 if it is an NSOE. *NI* is annual income before extraordinary items scaled by beginning of fiscal year market value of equity. *RET* is market-adjusted buy-and-hold annual returns from May of year t to April of year t+1; *NEG* is an indicator variable equal to 1 if *RET* is negative, and 0 otherwise. *MB* is the market-to-book ratio at the beginning of the fiscal year; *LEV* is equal to total debt divided by total assets at the beginning of the fiscal year; *SIZE* is equal to the natural log of total assets at the beginning of the fiscal year.
***: Significant at the 1% level; **: significant at the 5% level; *: significant at the 10% level.

Table 4
Regression results using the earnings-return model

	Expected Sign	*Full Sample* (1)	*Full Sample* (2)	*Full Sample* (3)	*SOEs* (4)	*NSOEs* (5)
Intercept (β_0)		0.031***	0.029***	0.029***	0.026***	0.037***
		(10.57)	(8.88)	(6.38)	(5.47)	(4.38)
NEG(β_1)		-0.016***	-0.012***	-0.010*	-0.011*	-0.019*
		(-7.81)	(-3.76)	(-1.72)	(-1.78)	(-1.65)
RET(β_2)		-0.006***	-0.003	-0.010*	-0.006	-0.027***
		(-2.69)	(-0.97)	(-1.79)	(-1.20)	(-2.60)
*NEG*RET*(β_3)	+	0.018***	0.034***	0.036***	0.018***	0.034***
		(4.13)	(5.03)	(5.19)	(3.39)	(3.45)
SOE(β_4)			0.002	0.001		
			(0.78)	(0.45)		
*SOE*NEG*(β_5)			-0.005	-0.004		
			(-1.52)	(-1.14)		
*SOE*RET*(β_6)			-0.005	-0.003		
			(-1.45)	(-0.89)		
*SOE*NEG*RET*(β_7)	-		-0.020***	-0.020***		
			(-2.92)	(-2.92)		
OWN(β_8)		0.003	0.003	0.003	-0.001	0.005
		(0.87)	(0.94)	(1.01)	(-0.20)	(0.92)
*OWN*NEG*(β_9)		-0.002	-0.003	-0.004	0.002	-0.009
		(-0.55)	(-0.79)	(-0.89)	(0.34)	(-1.18)
*OWN*RET*(β_{10})		0.007	0.007	0.009*	0.006	0.017**
		(1.55)	(1.42)	(1.85)	(1.05)	(2.07)

*OWN*NEG*RET*(β_{11})	-	-0.005	-0.022**	-0.023***	0.004	-0.034***
		(-0.61)	(-2.42)	(-2.57)	(0.44)	(-2.59)
*SOE*OWN*NEG*RET*(β_{12})	+		0.023***	0.023**		
			(2.57)	(2.50)		
CONTROLS		Included	Included	Included	Included	Included
*CONTROLS*NEG*				Included	Included	Included
*CONTROLS*RET*				Included	Included	Included
Year effect		Included	Included	Included	Included	Included
Test: $\beta_3 + \beta_7 = 0$			P-value=0.00	P-value=0.00		
Test: $\beta_{11} + \beta_{12} = 0$			P-value=0.86	P-value=0.94		
Adj. R^2		0.117	0.118	0.120	0.127	0.110
F-value		81.45	64.76	52.65	46.90	18.42
Obs.		10,944	10,944	10,944	7,580	3,364

Notes

The dependent variable is *NI*. *NI* is annual income before extraordinary items scaled by beginning of fiscal year market value of equity. *OWN* is equal to the scaled decile rank of percentage of shares held by all directors at the beginning of the fiscal year; *RET* is market-adjusted buy-and-hold annual returns from May of year t to April of year t+1; *NEG* is an indicator variable equal to 1 if *RET* is negative, and 0 otherwise; *SOE* is a dummy variable that equals 1 if the firm is an SOE and 0 if it is an NSOE. *CONTROLS* include: *MB*, measured by the scaled decile rank of the market-to-book ratio at the beginning of the fiscal year; *LEV*, measured by the scaled decile rank of total debt divided by total assets at the beginning of the fiscal year; *SIZE,* measured by the scaled decile rank of total assets at the beginning of the fiscal year.

In parentheses are *t*-statistics. ***: Significant at the 1% level; **: significant at the 5% level; *: significant at the 10% level.

Table 5
Regression results based on the earnings-change model

	Expected Sign	*Full Sample* (1)	*Full Sample* (2)	*Full Sample* (3)	*SOEs* (4)	*NSOEs* (5)
Intercept (β_0)		-0.003	-0.002	-0.004	-0.008	-0.004
		(-0.71)	(-0.43)	(-0.87)	(-1.48)	(-0.43)
NEG(β_1)		-0.017***	-0.019***	-0.011	-0.001	-0.017
		(-5.05)	(-4.43)	(-1.56)	(-0.13)	(-1.33)
ΔNI_{t-1} (β_2)		0.072***	0.078**	0.041	0.007	0.092
		(2.61)	(2.36)	(0.71)	(0.09)	(1.00)
$NEG_{i,t} * \Delta NI_{t-1}$ (β_3)	-	-0.752***	-0.834***	-0.827***	-0.613***	-0.947***
		(-14.34)	(-11.39)	(-11.27)	(-9.59)	(-9.85)
SOE(β_4)			-0.001	-0.002		
			(-0.23)	(-0.76)		
*SOE*NEG*(β_5)			0.003	0.005		
			(0.81)	(1.48)		
*SOE**ΔNI_{t-1} (β_6)			-0.011	0.001		
			(-0.37)	(0.02)		
*SOE*NEG**ΔNI_{t-1} (β_7)	+		0.133*	0.132*		
			(1.66)	(1.64)		
OWN(β_8)		0.005	0.005	0.004	-0.002	0.015**
		(1.45)	(1.41)	(1.12)	(-0.53)	(2.12)
*OWN*NEG*(β_9)		-0.002	-0.002	0.001	-0.001	0.001
		(-0.36)	(-0.29)	(0.12)	(-0.17)	(0.07)
*OWN**ΔNI_{t-1} (β_{10})		-0.154***	-0.155***	-0.146***	-0.031	-0.287***
		(-2.87)	(-2.89)	(-2.69)	(-0.43)	(-3.17)

$OWN*NEG*\Delta NI_{t-1}(\beta_{11})$	+	0.284***	0.464***	0.463***	-0.034	0.753***
		(2.97)	(3.77)	(3.76)	(-0.29)	(4.47)
$SOE*OWN*NEG*\Delta NI_{t-1}(\beta_{12})$	-		-0.289**	-0.287**		
			(-2.29)	（-2.28）		
CONTROLS		Included	Included	Included	Included	Included
*CONTROLS*NEG*				Included	Included	Included
$CONTROLS*\Delta NI_{t-1}$				Included	Included	Included
Year effect		Included	Included	Included	Included	Included
Test: $\beta_3+\beta_7=0$			P-value=0.00	P-value=0.00		
Test: $\beta_{11}+\beta_{12}=0$			P-value=0.11	P-value=0.10		
Adj. R^2		0.109	0.109	0.111	0.109	0.121
F-value		73.63	57.98	46.72	39.05	19.38
Obs.		10,639	10,639	10,639	7,445	3,194

Notes

The dependent variable is Δ*NI*. *ΔNI* measures change in annual income before extraordinary items from year t-1 to t scaled by total assets at the end of year t-1; *OWN* is equal to the scaled decile rank of percentage of shares held by all directors at the beginning of the fiscal year; *NEG* is an indicator variable equal to 1 if ΔNI is negative, and 0 otherwise; *SOE* is a dummy variable that equals 1 if the firm is an SOE and 0 if it is an NSOE. *CONTROLS* include: *MB*, measured by the scaled decile rank of the market-to-book ratio at the beginning of the fiscal year; *LEV*, measured by the scaled decile rank of total debt divided by total assets at the beginning of the fiscal year; *SIZE,* measured by the scaled decile rank of total assets at the beginning of the fiscal year.
In parentheses are *t*-statistics.***: Significant at the 1% level; **: significant at the 5% level; *: significant at the 10% level.