香港城市大學
City University of Hong Kong

中國會計學刊 China Journal of Accounting Research

中山大學
SUN YAT-SEN UNIVERSITY

Summer Research Workshop 2009

24-25 July 2009

Title: Compliance Cost, Corporate Governance and Accounting Conservatism

Presented by: Dr Song Zhu
Beijing Normal University

Discussant: Dr George Yang
Chinese University of Hong Kong

Compliance Cost, Corporate Governance and Accounting Conservatism

Donglin Xia

Professor
School of Economics and Management
Tsinghua University
xiadl@sem.tsinghua.edu.cn

Song Zhu*

Assistant Professor
School of Economics and Business Administration
Beijing Normal University
zhusong@bnu.edu.cn

* Corresponding Author

This paper is sponsored by National Natural Science Fund, “Accounting Conservatism, Governance Factors and Economic Consequences (70772017)”.

Compliance Cost, Corporate Governance and Accounting Conservatism

Abstract: Information asymmetry among stakeholders is the cause of accounting conservatism, since it leads to the asymmetric loss function which brings in the required mechanism to protect the interest of parties with information disadvantage; Agency theory suggests that stakeholders need conservative accounting reports since conservatism will be reciprocal beneficial for all parties and management incentives are more influential in accounting numbers. This paper investigates the determinants of accounting conservatism basing on the accrual measures using data from 2001 to 2006 in China. We find that more debt, more control right of controlling shareholders, and lower management ownership will lead to higher required conservatism. We also find that since the compliance cost for SOEs is higher than that for NSOEs, their accounting conservatism is higher thereafter. As the compliance cost reduces, accounting conservatism will be lower too. The independence of board has little influence on conservatism in China, but higher rate of insider director will lower the conservatism for NSOEs, showing the power of management on accounting information. We also find that among the determinants of conservatism in China, debt is the most important factor, ownership is the next, and board has little influence.

Keyword： Information Asymmetry; Agency Problem; Regulation Hypothesis; Accounting Conservatism; Compliance Cost; Corporate Governance

JEL: D82; M41

1. Introduction

Conservatism is an important and basic principle in accounting. Statement of Financial Accounting Concepts (SFAC) No. 2 defines conservatism as “it is allowed to underestimate the measurement bias for net income and net asset. If two estimates for future revenue or disbursement have the same probability, conservatism requires using the pessimistic estimate”. Feltham and Ohlson (1995) consider accounting as biased and unbiased according to whether the market value is different from the book value. Conservative accounting means the average market value is higher than the book value in the long run (Zhang, 2000; Beaver and Ryan, 2000; Penman and Zhang, 2002). Another school, since Basu (1997), accounting conservatism means bad news are more timely recognized in earnings than good news, which means that bad news and good news are asymmetric in timeliness and the consistent of earnings (Ball et al, 2000; Givoly and Hayn, 2000; Holthausen and Watts, 2001; Ball et al, 2003; Watts, 2003), known as the conditional conservatism (Beaver and Ryan, 2005).

Cross-country studies provide some evidences for the regulation hypothesis proposed by Watts (2003). Regulators in strong judicial systems will assume more pressures and are more likely to be critiqued by the public for the standards they set, and conservatism can better reduce their political costs (Watts, 2003), therefore in these countries, accounting reports are more conservative (Ball et al, 2000; Ball et al, 2003; Bushman and Piotroski, 2006). For regulators they may face political pressure, for these executants or management in firms, they may also face different political costs. The compliance costs to obey standards or other rules are also different for those executants or management, thus determining their incentives to comply with standards. How the compliance cost influences the conservatism of accounting reports is in question, especially in emerging markets. On the other hand, as researches on corporate governance is fast growing, showing governance strength has significant influence on many aspects of accounting and auditing, especially the quality of information. So how corporate governance influences the accounting conservatism is interesting to test and how does it play its function in emerging markets is another hot topic. Those questions motivate our research in accounting conservatism in China.

This paper investigates the determinants of conservative accounting using data of listed firms in China basing on the accruals measurement of conservatism. Our results support the theory proposed by Lafond and Watts (2008) that information asymmetry among equity investors is the substantial reason for accounting conservatism, and also

support Ball et al (2003) that incentives of management are more influential in accounting conservatism. More debt, more control right of controlling shareholders, and lower management ownership will lead to more asymmetry of information among those stakeholders, thus required conservative is higher. The compliance cost for SOEs are higher than that for NSOEs, therefore accounting conservatism is higher in SOEs. Results also suggest that in China, debt is the most important factor on accounting conservatism, ownership is the next, and the board has little influence.

Our paper provides more empirical evidence for the theory proposed by Lafond and Watts (2008) that information asymmetry among equity investors are the cause of accounting conservatism, and we extend this proposal to all stakeholders in the contracting. Second, we give more proof and evidence for Ball et al (2003) that incentives of management are more influential in accounting conservatism, as the compliance cost reduces, accounting conservatism will decline too. Third, we give evidence to the influence of corporate governance on accounting information and conservatism in China, a typical emerging market, and we also show the different importance of each determinant on conservatism. Fourth, we give indirect evidence to the positive influence of communist leadership, that more pressures and disciplines will constraint the opportunistic behaviors of management.

The rest of the paper is organized as follows: Section 2 reviews the related literatures. Section 3 presents our hypothesis. The empirical results are reported in Section 4 and Section 5. Finally, we make our conclusions in Section 6.

2. Literature Review

Great work has been done by Watts for the explanation of conservative accounting. Contracting hypothesis, litigation hypothesis, taxation hypothesis and regulation hypothesis are four reasons proposed by Watts (2003) to explain the cause of accounting conservatism. Many evidences are provided for contracting and litigation hypothesis (Basu, 1997; Watts, 2003), and for taxation and regulation hypothesis there are not many empirical evidences. Lafond and Watts (2008) suggest that information asymmetry among equity investors is the substantial reason for accounting conservatism, which means that conservatism is caused by the unverification of information that information advantage parties possess, and that results in asymmetric loss function among related parties.

Contracts can constrain managers' behaviors that may tunnel debt holders (Watts, 2003). Specifically, when firms face liquidation risk, contracting will require the

control right to be transferred from shareholders to creditors since most contracts are based on accounting numbers and will be effective when accounting performance goes worse. Nikolave (2006) suggest that when accounting system can produce timely signals about economic wealth of firms, contracts will become more valuable, and the empirical results show that firms with restrictive public debt contracts recognize losses more timely. Ahmed et al (2002) propose that conservative accounting can restrict the overpayment of dividend to shareholders to protect the interest of creditors. When tunneling through dividend is severe, creditors will require more conservatism in accounting, and the empirical results support their argument. Conservative accounting is also beneficial for firms and they also have incentives to take conservative reporting policy. Francis et al (2004) find that firms with conservative earnings pay fewer premiums for equity financing than those whose earnings are not conservative. Zhang (2008) examines the ex post and ex ante benefits of accounting conservatism to lenders and borrowers in the debt contracting process, finding that lenders offer lower interest rates to more conservative borrowers. Conservative accounting is reciprocal for both sides of debt contracts. In all, more debt will require higher conservatism in accounting reports due to potential losses creditors may face.

Separation of the ownership (the cash flow right) and the control right (the voting right) will bring in agency problems (Jensen and Meckling, 1976), and accounting conservatism is one of the mechanisms addressing the agency problem (LaFond and Roychowdury, 2006). First, accounting conservatism can help to prevent the overpayment to management (Watts, 2003); second, conservatism will motivate management to avoid taking projects with negative NPV (Ball and Shivakumar, 2005); third, conservatism will enhance the probability of abandoning negative NPV projects, since it will induce the further investigation by the board due to timely signals (Watts, 2003). The potential benefits of conservatism in corporate governance predict a positive relation between the strength of corporate governance and accounting conservatism (Ahmend and Duellaman, 2007). Using different measures, cumulative accruals in Givoly and Hayn (2000), market measurement in Beaver and Ryan (2000), and Basu (1997) model, Ahmend and Duellaman (2007) find that: 1) rate of inside directors are negatively related with conservatism; 2) rate of outside directors are positively related with conservatism. Beekes et al. (2004) also examine the relation between constitution of board and accounting conservatism proxy by the timeliness of earnings, and empirical results show that board with more outside directors will

recognize bad news more timely which means the constitution of the board is an important determinant of conservatism of annual financial reporting. LaFond and Roychowdury (2006) investigate the relation between CEO ownership and conservatism, finding that as the lower of CEOs' stockholding, agency problem is more severe, therefore accounting conservatism in a higher level is required. They give evidence on the negative relation between CEO ownership and accounting conservatism that due to asymmetric timely recognition of earnings, and this negative relation is robust after controlling for investment opportunities, providing evidence that shareholders have demand for accounting conservatism. Lim (2006) investigate whether good corporate governance can lower the discretional accounting choices of management to produce conservative accounting reports for Australia companies around their liquidation. Using multiple conservatism proxy and index for corporate governance, Lim (2006) find that firms with high quality of corporate governance will be more conservative when recognizing economic losses and bad news, which indicates that good corporate governance will lead to higher conservatism in accounting report.

Ball et al (2000) investigate how differences in the demand for accounting income in different institutional contexts cause its properties to vary across a wide range of countries, finding that code law accounting income is less timely, particularly in incorporating economic losses. Regulation, taxation and litigation cause variation among common law countries. Ball et al (2003) focus their analysis on four East Asian economies, proposing that although the standard setting is an important aspect in conservatism, the enforcement and incentives of management are more influential. Bushman and Piotroski (2006) find that firms in countries with strong judicial systems reflect bad news in earnings faster than firms in countries with weak judicial systems. They show that higher judicial quality and higher usage of public bonds or more diffuse ownership structures leads to more conservatism. Also, strong public enforcement aspects of securities law (but not private enforcement) slow recognition of good news in earnings relative to firms in countries with weak public enforcement. In all, the differences in institutions, judicial systems, and public enforcement will determine the political costs for regulators and also the compliance costs for executants or management in firms. Is it different for compliance cost in the same legal environment ignoring incentives? The answer is "yes". In China, different nature of firms will bring different incentives and pressures on those managements,

particularly between SOEs and NSOEs. It provides us with an opportunity to investigate the regulation explanation and political cost from the perspective of executants for conservative accounting in a single country.

3. Theory and Hypothesis

Information asymmetry among investors is the cause of accounting conservatism, and it leads to the asymmetric loss function of stakeholders (LaFond and Watts, 2008). Principle-agent relation exists among creditors, shareholders and management (Jenson and Meckling, 1976). While concentrated ownership is common in emerging market, agency problem is more severe between controlling shareholders or ultimate shareholders and the minority shareholders and creditors.

Because of the information asymmetry between creditors and shareholders, creditors will require more conservative accounting when they expect loss will occur (Watts, 2003; Basu, 1997). Separation of control right and ownership creates the agency problem, and accounting conservatism is one of the mechanisms to address this problem (LaFond and Roychowdury, 2006). Interests of minority shareholders are often expropriated by controlling shareholders (Claessens et al, 2000; Fan and Wong, 2003), they should face the entrenchment risks from controlling shareholders as tunneling like related party transactions, which motivates them to demand conservative accounting to entreat the opportunistic behaviors of controlling shareholders and management. Management has information advantage relative to others, and they have incentive to manipulate information disclosure that would be beneficial for them and to do something that leads to unnecessary agency cost, and all these behaviors will reduce firm value and interests of other stakeholders (Jensen and Meckling, 1976; Watts and Zimmerman, 1986). The board should be responsible for all other stakeholders besides the controlling shareholders, including creditors and minority shareholders. Conservative accounting reports can help the board to lower the information asymmetry between management and other stakeholders, to reduce the potential losses for stakeholders with information disadvantage, and to reduce the agency costs due to asymmetric loss function and limited liability of management (Watts 2003). Strong board can be efficient in effective contracting, and understand the benefits of conservatism better; therefore they should require more conservative accounting report. The result of the game of all parties will be embodied in board.

Insert Figure 1 about here

3.1. Influence of Creditors

Accounting conservatism can help to protect creditors in lowering their risk, since conservative accounting will affect the net income and retain earnings reported, besides, it also means more restrictions on dividend paid out (Watts and Zimmerman, 1986). Because of the information asymmetry between creditors and shareholders, creditors will require more conservative accounting when they expect loss will occur (Watts, 2003; Basu, 1997). Since the more uncertainty of future profitability, the higher risk for creditors in the perspective of operation, higher dividend in current period will over transfer the resources to shareholders, harming the interest of creditors. Therefore creditors will require more protections to lower the dividend payout (Ahmed et al, 2002). Further, accounting conservatism will affect the efficiency of debt contracts that based on accounting numbers. Timely loss recognition can exist before contracting; also it can provide creditors with new information to react to the violations of contracting, to enforce their right timely on restricting the contract, like limiting the leverage, the investment and dividend policy (Zhang, 2005).

On the other hand, debtors will anticipate the effect of their behaviors on future debt contracting, keeping accounting reports conservative can lower the information asymmetry and protect the interest of creditors, therefore establishing their reputation and lowering the cost of current debt and future debt. Under this situation, accounting conservatism can create bilateral benefits between creditors and debtors, therefore adopting conservative accounting reporting policy can be beneficial for both sides (Zhang, 2005). Since conservatism can lower the cost of financing for debtors, they are motivated to report their numbers under conservative accounting (Ahmed et al, 2002; Zhang, 2005). Thus, we hypothesize:

H1: the higher the debt, the more conservative for accounting reports.

3.2. Influence of Ownership

Ball et al (2003) suggest that the incentive of management will significantly influence the extent of accounting conservatism. In China, different nature of firms will bring different incentives and pressures on those managements. In order to obtain external finance, both SOEs and NSOEs have incentives to manipulate accounting information. However, SOEs have some nature of government, and their objectives

are more diversified, which leads to less eager to pursue opportunistic benefits by information disclosure compared with NSOEs. NSOEs face more financing constraints than SOEs, and conservative accounting may lead to less profitable accounting earnings, then the external financing, both debt and equity, will be undermined, thereafter the eager to pursue maximum profits will offset the incentive to take conservative accounting for NSOEs.

Another significant difference between SOEs and NSOEs is that for management in SOEs, pressures are much heavier and constraints are more restrictive. In NOSEs it seems that management is well monitored by principals, namely the entrepreneurs, and the management has incentive to improve the governance of company, therefore to maximize the value. “Corporate governance” seems to be better for NSOEs than for SOEs apparently. However, actually management in NSOEs are facing less political and legal restrictions than those in SOEs, and they can handle many problems via unofficial channels, which management in SOEs dare not to and cannot do. In NSOEs, compliance with accounting principles and regulations is determined by the integrity of the management or the ultimate shareholders of NSOEs. Because the punishment for accounting standard violation and the strength of other regulations are not efficient and effective enough, the cost of violation is too low for those entrepreneurs to obey, and this situation is more severe in countries with unsound legal and institutional market (Ball et al, 2003; Bushman and Piotroski, 2006), like China. So compliance cost for NSOEs is much lower.

While in SOEs, it seems that the owner does not exist which is usually called the “principle absence” situation, but actually the management in SOEs is restricted with more constraints and their pressures are higher than those in NSOEs. The political pressure on management in SOEs is much higher, since management will be constrained by restrictive disciplines and rules. Management will tend to avoid defects or misfeasance rather than the performance when they should choose between good performance and misfeasance. Compliance with disciplines and rules is the most important consideration for management in SOEs, since once they violate the disciplines and rules they will be critiqued by regulators and public, losing their reputation and in extreme cases they may lose the politician future, which is their most important compliance cost. Therefore, it’s compulsory to obey the disciplines and laws/regulations and the incentive for compliance is higher for SOEs than NSOEs. Thus, we hypothesize:

H2: accounting conservatism for SOEs is higher than that for NSOEs.

In developing market with concentrated ownership, especially in East Asia, management are usually appointed and controlled by controlling shareholders or ultimate shareholders, and firms' behaviors reflect the willing of controlling shareholders. Management cannot drive the operation of firms like those in U.S, because the control of controlling shareholders and ultimate shareholders are significantly influential. Ultimate shareholders can build powerful empire using few cash flows via the pyramid structure, and this incentive is evident in countries and districts with unsound legal system and undeveloped economy (La Porta et al., 1999; Claessens et al, 2000). As the increase of pyramid, the information asymmetry will be more severe. The higher asymmetric of information, the higher demand for accounting conservatism by investors (Watts and Lafond, 2008). Further, multiple principle-agent problem will aggravate as the increase of pyramid, and separation of control right and cash flow right will be more severe. Thus, as the increase of pyramid, demand for accounting conservatism will be higher.

H3a: the longer the pyramid, the more conservative for accounting reports.

In general the influence of pyramid is like what we propose above, however for SOEs, it has its specialty. While the incentive to create the pyramid structure for SOEs is to decentralize the power, to lower the interference of government, to make the operation of listed firms more flexible in the free market economy (Fan et al, 2005; Zhu, 2006). Therefore the negative influence from government will be lower and firms can operate more freely under the mechanism of market economy. Firms can be operated according to the will of management, resulting in that interference and the pressures from government are much lower. "Political future" is not easy to get and not substantial as "competitive market compensation". Therefore, the compliance with disciplines and laws/regulations will be lower as the increase of the pyramid for SOEs. Thus, we hypothesize:

H3b: for SOEs, longer pyramid will lower the demand for more conservative accounting report, lower conservatism will be found.

In countries with diffused ownership, like U.S., shareholders can monitor management through laws and accounting information, resulting in the demand for accounting conservatism. While in countries with unsound monitoring mechanism and institutions, it will be realized by the existence of controlling shareholders to strengthen the monitoring on management and protection for investors (La Porta et al,

1999). As the increase of control right, dominant controlling shareholders compared with management will lower the reliance on accounting information, thus lower the demand of conservatism to some extent. That means more voting right for controlling shareholders and ultimate shareholders, the lower demand for conservatism by them.

On the other hand, some researches find that as the increase of control right, controlling shareholders may more powerful in tunneling the minority shareholders, and the controlling shareholders may use the accounting information to manipulate earnings, also lowering the quality and conservatism of accounting information[1].

H4a: the more the voting right for ultimate shareholders, the lower conservative for accounting reports.

In countries with weak investors protections, interest of minority shareholders is often expropriated by controlling shareholders (Claessens et al, 2000; Fan and Wong, 2002), since the minority shareholders only have small part of cash flow right, and they do not have enough voting right to confront the entrenchment activities by controlling shareholders. The higher deviation of voting right from cash flow right for controlling shareholder, the higher incentive for them to tunneling (Jenson and Meckling, 1976), and this stimulates the demand of minority shareholders for conservative accounting information to protect their interests.

And for some firms, ultimate shareholders do not control the listed firms directly; therefore there is also information asymmetry between ultimate shareholders and management in firms. Thus the shareholders will also have incentives to require conservative accounting. The more divergence of control right and cash flows right, the more risk they may face, thus more conservative accounting will be required.

H4b: the more deviations of voting right from cash flow right, the more conservative for accounting reports.

3.3. Influence of Management

Though management are usually controlled by controlling shareholder or ultimate shareholders, and their behaviors reflect the willingness of controlling shareholders in East Asia, they still have some space to behave for themselves. Management have information advantages compared to others, and they have incentives to manipulate information that disclosing information beneficial for them, to do something which leads to unnecessary agency cost, and all these behaviors will reduce firm value

[1] Although the minority shareholders may demand more conservative accounting as expecting the potential losses they may suffer due to the tunneling activities by the controlling shareholders, for the much less voting right to put pressures on controlling shareholders or management, this demand may exist but the effect may be insignificant.

(Jensen and Meckling, 1976; Watts and Zimmerman, 1986). Watts (2003) propose that accounting conservatism can reduce the incentive and ability of management to over value the earnings and equity, since conservatism requires more restrictive standards to recognize revenue, and reduces the ability of management to not disclose those expected losses. Therefore, accounting conservatism prevents the over payment to management due to the limited liability and limited tenure. On the other hand, the compensation and political future for management will be based on the performance of the firm. Splendid performance will bring them with more material awards and some psychic encouragements, so managements have incentives to improve the performance, both for managements in SOEs and NSOEs. However, accounting conservatism will recognize bad news timelier and revenue recognition is asymmetric, causing a negative effect on firm performance. Therefore, to maximize their interests, management will influence the reporting policy, lowering the conservatism.

H5: the more stockholding by management, the lower conservative for accounting reports.

Conservative accounting report will help the board to lower the information asymmetry between management and other stakeholders, and the agency cost due to the asymmetric loss function and limited tenure of management (Watts, 2003). Dominant board with more independent directors will be more efficient in effective contracting, and better understand the benefits from conservative accounting reports; therefore, they will require more conservative reporting policy (Beekes et al, 2004; Ahmend and Duellaman, 2007). On the other hand, board dominated by inside directors will face less monitoring due to weak incentive, and under this situation, management will adopt aggressive accounting policy. Separation of CEO and chairman will enhance the independence of board, improving the monitoring on management. But it will also destroy the connection of corporate strategies, enlarge the competition between CEO and chairman and resulting in increased monitoring cost and harmful for investor protection. Furthermore, when insiders tend to expropriate the outside minority shareholders, separation of CEO and chairman cannot play its role in shareholders protection. In all, concerning the influence of the board, we hypothesize:

H6: the more dependent of the board, the more conservative of accounting reports.

4. Data and Variables

4.1. Data and Samples

In order to avoid the influence of fundamental differences of listed firms launching IPO or de-listed in different time, we use the same firms listed from 1999 to 2006, so 855 firms for each year. Before 1999, firms need not disclose their cash flow statements, so we start after 1999 for the ease of obtaining cash flow data. Since 2007, all listed firms in China should comply with the new accounting principles, which have many differences from the old one, therefore to keep all the financial data consistent, we just use data before 2007. The samples used to measure conservatism are from 2001 to 2006 since we need three years financial information to compute the conservatism measures (Ahmend and Duellaman, 2007; Qiang, 2007). After dropping 136 samples whose ultimate shareholder information is not complete, 72 samples whose growth exceeds 500%, 81 samples with leverage exceed 100%, and the final sample is 4,841 samples from 2001 to 2006. In order to minimize the influence of outliers, we winsorize the conservatism measure for upper and bottom 1% samples respectively.

Information about ultimate shareholders is excerpted from annual financial reports manually. Other financial data is from Wind and CSMAR database.

4.2. Variables

Most researches on accounting conservatism use the Basu (1997) model, which has some measurement errors and is criticized by recent papers (Ball and Shivakumar, 2005; Dietrich et al, 2006; Gregoriou and Skerratt, 2007), and whether it can measures conservatism is controversial (Dietrich et al, 2006; Gregoriou and Skerratt, 2007). And also this measurement is hardly used to test the economic consequences of conservative accounting. While conservative accounting will lead to negative accruals, the more negative of accruals, the more conservative for financial reports (Givoly and Hayn, 2000). Ahmend and Duellaman (2007), Qiang (2007) also use this measurement of conservatism, thus we use this accrual measure proposed by Givoly and Hayn (2000), Ahmend and Duellaman(2007), Qiang(2007). Since accounting accruals will reverse in the next period, we use three years cumulative accrual as conservatism measure (Ahmend and Duellaman, 2007). For the ease of explanation, we multiply the cumulative accruals by -1, thus the higher this measure, the more conservative it proxy. Con11 is three years cumulative accruals multiply by

-1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end. Con12 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items deduct cash flow from operation, and then divided by total assets at year end excluding the influence of depreciation. Firms often use extra-ordinary items to manipulate their earnings, thereafter, we also control for this, measuring conservatism using earnings before extra-ordinary items. Con21 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings before extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con22 is also three years cumulative accruals multiply by -1, but each year accrual equals to net income before extra-ordinary items deduct cash flow from operation, and then divided by total asset at year end.

The influence of creditors is proxy by the debt ratio; Lev is the total debt ratio, equal to the total liability divided by total assets at year end. Ownership structure variables include: the control chain or pyramid (CHAIN), measured by the corporate layers from ultimate shareholders to the listed firms; Control right of ultimate shareholders, proxy by the voting right of ultimate shareholders considering the indirect holding (V); the separation of ownership right and control right, proxy by the deviation of voting flow right from cash flow right (CV); and the nature of the ultimate shareholders, namely whether it is government or not (STATE), STATE is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise. Governance strength of board consists of the ownership of management (Manown), the ratio of outside directors to total directors in board (Outrate), the rate of directors who are also management to the total directors in board (Insiderate), the total number of directors in board (Boardsize), and the same person for CEO-Chairman, a dummy variable, 1 indicate the CEO is also the chairman of the board, zero otherwise.

Fundamental aspects of listed firms include: cash flow from operation to total asset at year end (CFO), the size of firms which is proxy by the natural log form of total asset at year end (LnAsset), and future perspective proxy by the growth rate of revenue (Growth), and industries, 11 dummy variables (Inds) for 12 industries after dropping those in finance industry, which is categorized according to the standard of CSRC.

4.3. Model Specification

Since our samples range from 2001 to 2006, we use the panel data model because Panel Data Model has following advantages over cross-sectional model and pure time series model: 1) panel data model enlarges the sample beneficial to improve the efficiency of parameter estimation; 2) it lowers influence of the multi-co-linearity problem; it can identify and measure some factors that cross-sectional model and pure time series model cannot identify; 4) it can lower the estimation bias. We first test for the model specification using Huasman test to choose the random effect model or fixed effect model. Hausman tests show that chi2 is significant in 0.0000 levels, indicating the fixed effect model is much better. Of course we also use the pooled crossing data to do robust test.

5. Empirical Analysis

5.1. Descriptive Statistics

Table 1 shows the statistics for conservatism measures based on cumulative accruals in each sample year[2].

Insert Table 1 about here

Figure 2 and Figure 3 illustrate the trend of conservative accounting report by giving graphic exhibits.

Insert Figure 2 about here

Insert Figure 3 about here

Statistics in table 1 and figures in Figure 2 and Figure 3 evidently show that since 2001, accounting conservatism of listed firm in China is increasing gradually.

Table 2 is the statistics for regression variables of sample firms.

Insert Table 2 about here

Conservatism measurement based on earnings before extra-ordinary items and

[2] All those numbers are not winsorized.

before depreciation is winsorzied, the average levels are about 0.02 and the means of the other two measurements after depreciation is about 0.10. Positive numbers indicate the conservative reporting policy.

Average debt ratio for sample firms are around 49%, and median is also about 49%. Control right, or voting right, of ultimate shareholders is 42% on average, and the deviation of cash flow right and voting right is not severe, average CV is 0.85, and the median is 1, which means for most firms the voting right does not deviate much from the cash flow right and ultimate shareholders do not control listed firms with very low cash flow.

Ownership of management in listed firms is very low, only about 0.03%, management is not provided with enough stock incentives in China. Concerning the board, outside directors are about one third of all and that number is the minimum standard required by CSRC, which shows that listed firms do not have much incentive to appoint outside directors and what they have done is just to comply with the requirement. This situation may lead to the ineffectiveness of outside directors. While inside director's rate is high, management in the board is 20%, and they can convey more information to other directors about firms daily operating, lowering the inefficient information communication and decision making process. The phenomenon that one person in charge of CEO and chairman in board is gradually disappearing, but still in some firms CEO is the chairman, which may lead to self-monitor dilemma.

Most sample firms are SOEs. The cash flow right for SOEs samples is 36%, and the deviation from voting right is not too much. While the cash flow from operation to total asset is much low, which may be due to high growth, exhibiting by 18.6% growth in revenue, and this also leads to more accruals.

5.2. Regression Analysis

Table 3 shows results for the determinants of conservatism based on cumulative accruals. First, we regress for the influence of each aspect of those factors on conservatism, creditors, ownership structures, and management board, and then we combine all those factors into one regression to get the integrated influence.

Insert Table 3 about here

Since creditors are in the information disadvantage, and in order to protect their interests not expropriated by management and controlling shareholders, they will

require conservative financial reporting. And the more their interest in firms, the more anticipated loss they will suffer in future, therefore the higher pressure they will impose on management, and higher demand for conservative accounting. And because more conservative accounting can lower the unnecessary loss and financing cost, it is benefit for management and controlling shareholders if they do this, thus they have such incentive to adopt conservative accounting. Results in table 3 show that both the individual test and combined test after controlling for the influence of ownership structure, management ownership and other fundamentals, Lev is positively related with accounting conservatism and significant in 0.01 levels, which means that more debt will impose more pressures on management about reporting policy, therefore lead to higher conservative accounting, supporting hypothesis 1.

Accounting conservatism for SOEs is higher than that for NSOEs, evident by the significant positive coefficients for STATE in ownership regression and all factors regression. Though in SOEs it appears to be no principal, so called “no one in charge”, actually the pressures and constraints for managements in SOEs are much higher than for those in NOSEs. SOEs are facing more political pressures, and leaders are restricted by political disciplines and laws, their compliance cost is higher. While for NOSEs, management or individual ultimate shareholder do not constrained by those restrictive disciplines. Therefore the incentive for compliance with accounting principles is higher for SOEs than for NSOEs, hypothesis 2 is supported.

Influence of the pyramid on conservatism is positive in general, especially for NSOEs, indicating by the positive relations between Chain and conservatism proxy in both regressions, supporting hypothesis 3a. While SOEs have distinguished feature from NSOEs, as the increase of control chain, government interfere is lower, therefore the pressures and incentive to comply with accounting principle is reduced, shown in the negative coefficient for STATE*CHAIN, significant in 0.05 levels at least, consistent with hypothesis 3b.

As the increase of control right, rely on accounting information is reduced for dominant controlling shareholders, thus required conservatism is reduced. And also as the increase of the control right (voting right) of controlling shareholders or ultimate shareholders, expropriation to small investors will aggravate, and agency problem will be more severe (Jensen and Meckling, 1976; Watts and Zimmerman, 1986), accounting information is more likely to be manipulated and conservatism is reduced. Regression results show significant negative coefficients for V in all regressions,

hypothesis 4a is supported. However the coefficients for deviation from voting right to cash flow right are not significant. Individual regression and combined regressions are the same, hypothesis 4b is not supported. That may be due to the less divergence of control right and cash flow right in China, since CV for more than half of the sample firms is 1, indicating no divergence.

To maximize their only interests, management will manipulate the accounting report policy, reducing the extent of conservatism in annual accounting reports, especially when their ownerships are large and their compensations are more closely linked with firm performance. It is shown by the negative relation between Manown and conservatism proxy, significantly in 0.05 levels, consistent with hypothesis 5. The motive to introducing the mechanism of outside directors into China is to protect investors' interest by keeping the board more dependent and care for small investors. Higher outside director ratio will indicate higher dependence of board, therefore protection for creditors and small investors will be better. However, actually outside directors in China do not play an significant role as authorities and small investors expect, conservative accounting policy is not affected by outside directors. While management in board, defined as inside directors, may adopt aggressive accounting policy to maximize their interests in theory, however our results don't support this argument, since coefficients for Insiderate are not significant in regressions. Board size and one person in charge of CEO and Chairman also do not have influence on accounting conservatism, showing that influence of board on accounting conservatism in China listed firms is not important as ownership structure or debt. The board sometime is just a form or puppet for controlling shareholders or ultimate shareholders.

We also compare the influential of each factor on conservatism using the additional explaining power, the adjusted R^2, to illustrate. In those factors affect the extent of conservatism, debt is the most important factor, since adding the debt in regression the explaining power for regression is highest, and the additional explaining power for debt is 6%. Effect of ownership structure is in the middle, and management ownership and characteristic of board have little influence on conservatism, they only explain 0.1% in addition to other fundamentals.

Table 4 gives the results for SOEs samples. In individual regression, coefficient for Chain is significantly negative, meaning as the increase of pyramid conservatism will be lower, consistent with hypothesis 3b. Since the pressures and restrictions from

government will be lower as the pyramid increases for SOEs, the compliance cost for management will be lower, reducing the conservatism in accounting report. Regression coefficient for Chain in all factor regression is still negative, but not significant. For all firms as the control chain increase; the information asymmetry will be more severe, thus increasing the demand for conservatism. Net effect of pyramid on conservatism for SOEs is determined by the effect of reduced compliance cost and the effect of severer information asymmetry. In all, individual regression and all-include regressions support our hypothesis, consistent with results in table 3.

Insert Table 4 about here

Table 5 gives results for NSOEs. Different from table 3 is that coefficient for ownership of management (Manown) is not significant. This may be related to the influence of ultimate shareholders as individual person in NSOEs, not like in SOEs where management have more authorities relatively. Another difference is that, for NSOEs, rate of inside directors will lower the conservatism of annual financial reporting. This may be due to the less monitoring effect of board which is dominated by those management as insider in board, and under this situation, management tend to adopt aggressive accounting reporting policies.

Insert Table 5 about here

Table 6 is regressions for conservatism measure based on earnings after extra-ordinary items. Results in table 6 are basically the same as those in table 3 to 5, again supporting our hypothesis.

Insert Table 6 about here

5.3. Robust Test

Table 7 shows the regression results using another two conservatism measures which are based on earnings before extra-ordinary items.

Insert Table 7 about here

Results in table 7 are basically the same as results in table 3, consistent with our hypothesis.

We also use pooled-crossing method to run the regressions, and results are

consistent with above.

6. Conclusion

Information asymmetry among stakeholders is the cause of accounting conservatism, since it leads to the asymmetric lost function which brings in the required mechanism to protect the interest of parties with information disadvantage; Agency theory suggests that stakeholders need conservative accounting reports since conservatism will be reciprocal beneficial for all parties. This paper investigates the factors influencing the accounting conservatism from the information asymmetry and agency problem perspective, using the data in China and the accounting accrual measures for accounting conservatism. Results in our paper support the theory proposed by Lafond and Watts (2008), as the higher of leverage, the higher of control from ultimate shareholders, and the lower of management ownership will lead to more asymmetric information among creditors, ultimate shareholders, management and investors, agency problems will push the requiring of conservative accounting reporting policy. We provide more evidence for argument suggested by Ball et al that incentive to comply with standards for management will significantly determine the accounting reporting and the information quality. NSOEs and SOEs in China have different compliance costs. As the compliance cost reduces, accounting conservatism is reduced. However, our result weak support the influence of board independence on accounting conservatism, both for SOEs and NSOEs.

The data we use is before 2007, when CSRC initiates the new accounting principle, which is permeated with the concept of fair market value. How the fair market value concept influence the conservative accounting compared with the historical cost accounting deserve more work to do.

Reference

Ahmed, A.S., Billings, B.K., Morton, R.M., Stanford-Harris, M., 2002. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. The Accounting Review 77 (4): 867-890.

Ahmed, A. S., and Duellman, S., 2007. Accounting conservatism and board of director characteristics: An empirical analysis. Journal of Accounting & Economics, Vol 43, Issues 2-3, Pages 411-437.

Ball, R, S. P. Kothari, and A. Robin. 2000. The effect of international institutional

factors on properties of accounting earnings. Journal of Accounting & Economics 29 (February): 1-51.

Ball, R., Robin, A., Wu, J., 2003. Incentives vs. standards: Properties of accounting income in four East Asian Countries. Journal of Accounting & Economics 36, 235-270.

Ball, R. and L. Shivakuma, 2005. Earnings quality in U.K. private firms, Journal of Accounting and Economics 39(1): 83-129.

Basu, S. 1997. The conservatism principle and the asymmetric timeliness of earnings, Journal of Accounting & Economics 24, 3-37.

Beaver, W. and S. Ryan. 2000. Biases and Lags in Book Value and their Effects on the Ability of the Book-to-Market Ratio to Predict Book Return on Equity. Journal of Accounting Research 38, 127–148.

Beekes, W., Pope, P., and Young, S., 2004. The Link Between Earnings Timeliness, Earnings Conservatism and Board Composition: Evidence from the UK. Corporate Governance Vol.12, pp. 47-59.

Bushman, R. and J. Piotroski. 2006. Financial Reporting Incentives for Conservative Accounting: The Influence of Legal and Political Institutions. Journal of Accounting and Economics 42,107-148.

Chen, Chao, and Song Zhu. The Characteristics of Ultimate Shareholder, Government Control and the Performance of Companies in China, America Accounting Association 2006 Conference, Washington D.C, 2006.8.

Claessens, S., S. Djankov, and L. Lang, 2000. The separation of ownership and control in East Asian Corporations, Journal of Financial Economics 58, 81-112.

Dietrich, J. R, Muller, K. A., and Riedl, E. J., 2006. Asymmetric Timeliness Tests of Accounting Conservatism, Working paper, The Ohio State University.

Fan, Joseph, P.H. and T.J. Wong, 2002, Corporate ownership structure and the informativeness of accounting earnings, Journal of Accounting and Economics 33, 401–425.

Feltham, G., and J. A. Ohlson. 1995. Valuation and clean surplus accounting for operating and financial activities. Contemporary Accounting Research 11 (Spring): 689-731.

Givoly, D., and C. Hayn. 2000. The changing time-series properties of earnings, cash flows and accruals: Has financial accounting become more conservative? Journal of Accounting & Economics 29 (June): 287-320.

Gregoriou, A., and Skerratt., L. 2007. Does the Basu model really measure the conservatism of earnings? Working paper, Brunel Business School.

Jensen, M., W. Meckling, 1976, Theory of the firm: managerial behavior, agency costs, and ownership structure, Journal of Financial Economics 3, 305-360.

La Porta, R., Lopez-de-Silanes and F., Shleifer, A., 1999, Corporate ownership around the world, Journal of Finance 54, 471-518.

LaFond, R. and Roychowdhury, S. 2006. The Implications of Agency Problems between Managers and Shareholders for the Relation between Managerial Ownership and Accounting Conservatism. Working paper.

LaFond, R. and Watts, R. 2008. The Information Role of Conservatime. The

Accounting Review 83, 447-478.

Lim, R., 2006. The Relation between Corporate Governance and Accounting Conservatism: Australian Evidence, Working paper.

Nikolaev, V., 2006. Debt Contract Restrictiveness and Timely Loss Recognition. Working paper.

Penman, S. H., and Zhang, X. J. 2002. Accounting Conservatism, the Quality of Earnings, and Stock Returns. The Accounting Review, Vol. 77, No. 2, pp. 237-264.

Qiang Xinrong, 2007. The Effects of Contracting, Litigation, Regulation and Tax Costs on Conditional and Un-conditional Conservatism: Cross-Sectional Evidence at the Firm Level. The Accounting Review 82, 759-796.

Watts, R.L. 2003. Conservatism in Accounting Part I: Explanations and Implications. Accounting Horizon Vol. 17, No.3, pp 207-221.

Watts, R.L, and J.L. Zimmerman, 1986. Positive Accounting Theory, Englewood Cliffs, NJ: Prentice Hall.

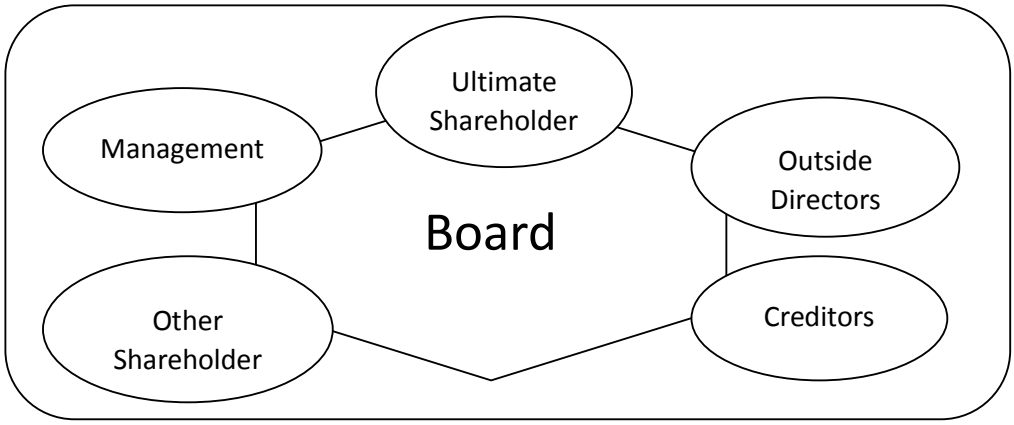
Zhang, X. 2000. Conservative accounting and equity valuation, Journal of Accounting and Economics 29: 125-149.

Zhang, J, 2005. Efficiency gains from accounting conservatism: benefits to lenders and borrowers, working paper, MIT.

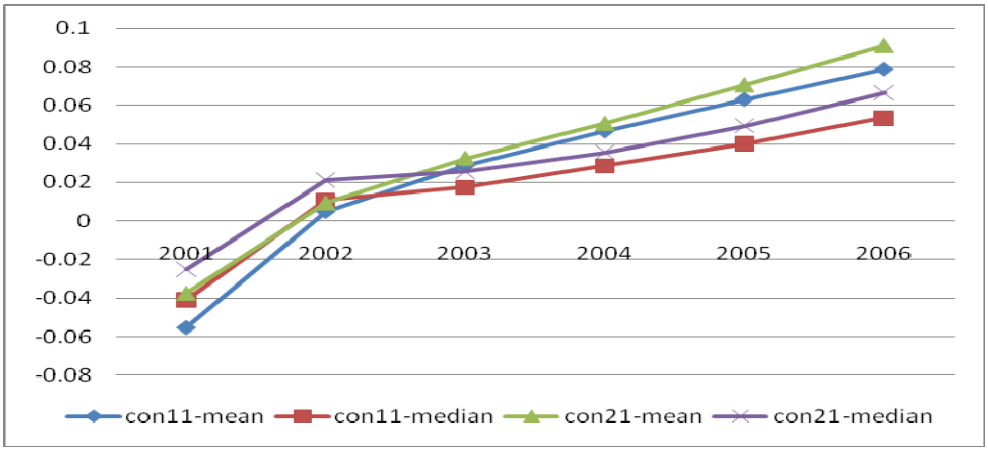
Zhang, J, 2008. The contracting benefits of accounting conservatism to lenders and borrowers, Journal of Accounting and Economics 45: 27-54.

Zhu, Song, 2006. The Characteristics of Ultimate Shareholders and Informativeness of Accounting Earnings, China Accounting and Finance Review 3: 1-30.

Graph 1 Decision Making Authorities

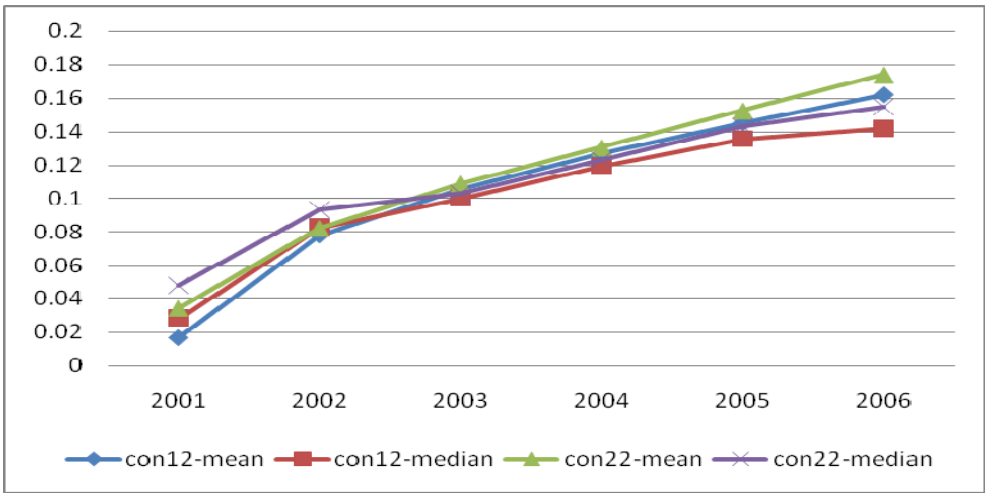


Graph 2 Evolution of Accounting Conservatism in China Listed Firms-Based on Earnings before Depreciation



Note: Con11 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con21 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings before extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end.

Graph 3 Evolution of Accounting Conservatism in China Listed Firms-Based on Earnings after Depreciation



Note: Con12 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items deduct cash flow from operation, and then divided by total assets at year end; Con22 is also three years cumulative accruals multiply by -1, but each year accrual equals to net income before extra-ordinary items deduct cash flow from operation, and then divided by total asset at year end.

Table 1 Evolution of Accounting Conservatism in China Listed Firms-Statistics

Variables	Year	N	Mean	SD	Max	Median	Min
Con11	2006	855	0.0789	0.2405	1.8146	0.0536	-0.7933
	2005	855	0.0632	0.2408	1.4457	0.0401	-1.4461
	2004	855	0.0468	0.2405	1.7303	0.0289	-1.3854
	2003	855	0.0288	0.2539	1.8933	0.0176	-2.1019
	2002	855	0.0050	0.2465	2.1174	0.0110	-2.2488
	2001	855	-0.0553	0.2195	0.9595	-0.0409	-1.6258
Con12	2006	855	0.1619	0.2470	1.8802	0.1418	-0.7897
	2005	855	0.1451	0.2493	1.4727	0.1356	-1.4298
	2004	855	0.1267	0.2494	1.7949	0.1192	-1.3698
	2003	855	0.1053	0.2603	1.9512	0.1002	-2.1000
	2002	855	0.0779	0.2507	2.1439	0.0827	-2.2435
	2001	855	0.0167	0.2264	1.4934	0.0282	-1.5784
Con21	2006	855	0.0910	0.2251	1.7730	0.0667	-0.7911
	2005	855	0.0706	0.2274	1.4518	0.0494	-1.3540
	2004	855	0.0506	0.2196	1.7024	0.0357	-1.3011
	2003	855	0.0326	0.2339	1.4988	0.0257	-2.0027
	2002	855	0.0094	0.2233	1.4181	0.0210	-2.1549
	2001	855	-0.0375	0.2111	1.0217	-0.0253	-1.6074
Con22	2006	855	0.1740	0.2321	1.8386	0.1550	-0.7875
	2005	855	0.1526	0.2365	1.4788	0.1432	-1.3377
	2004	855	0.1305	0.2288	1.7536	0.1232	-1.2854
	2003	855	0.1090	0.2407	1.5477	0.1029	-2.0007
	2002	855	0.0824	0.2279	1.4607	0.0934	-2.1496
	2001	855	0.0346	0.2178	1.5556	0.0478	-1.5600

Note: Con11 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con12 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items deduct cash flow from operation, and then divided by total assets at year end; Con21 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings before extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con22 is also three years cumulative accruals multiply by -1, but each year accrual equals to net income before extra-ordinary items deduct cash flow from operation, and then divided by total asset at year end.

Table 2 Descriptive Statistics

Variables	N	Mean	SD	Min	Median	Max
Con11	4841	0.0161	0.1877	-0.5893	0.0160	0.6276
Con12	4841	0.0947	0.1980	-0.5454	0.0985	0.7351
Con21	4841	0.0260	0.1784	-0.5580	0.0267	0.6224
Con22	4841	0.1046	0.1885	-0.5123	0.1063	0.7301
Lev	4841	0.4875	0.1826	0.0081	0.4929	0.9964
State	4841	0.7660	0.4234	0	1	1
Chain	4841	2.3755	0.7331	1	2	7
V(%)	4841	42.0508	16.4621	5	40.1500	88.5800
CV	4841	0.8464	0. 2529	0	1	1
Manown(%)	4841	0.0289	0.1184	0	0.0090	5.1177
OutRate	4841	0.2759	0.1239	0	0.3333	0.6000
InsideRate	4841	0.2036	0.1275	0	0.1818	1
BoardSize	4841	9.6170	2.2396	4	9	19
CEOChair	4841	0.0994	0.2992	0	0	1
CFO	4841	0.0537	0.1079	-1.3799	0.0513	1.1708
LnAsset	4841	21.1375	0.9108	17.5367	21.0742	24.9905
Growth	4841	0.1860	0.5252	-1	0.1204	4.8780

Note: 1. Con11 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con12 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items deduct cash flow from operation, and then divided by total assets at year end; Con21 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings before extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con22 is also three years cumulative accruals multiply by -1, but each year accrual equals to net income before extra-ordinary items deduct cash flow from operation, and then divided by total asset at year end; Lev is the total debt ratio, equals to total liability divided by total assets at year end; State is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise; Chain is the length of control chain from ultimate shareholder to listed firm; V is the voting right of ultimate shareholder, and CV is cash flow right divided by voting right; ManOwn is the ownership of management; OutRate is the rate of outside directors to the total directors in board; InsideRate is the rate of directors who are also management to the total directors in board; BoardSize is the total number of directors in board; CEOChair is a dummy variable, 1 indicate the CEO is also the chairman of the board; CFO is the cash flow from operation to total asset at year end; LnAsset is the natural log form of total asset at year end; Growth is the growth rate of revenue.

Table 3 Information Asymmetry, Agency Problem and Accounting Conservatism-Con11

Regression Model:

$$Con_{it} = \alpha_0 + \alpha_1 Lev_{it} + \alpha_2 State_{it} + \alpha_3 Chain_{it} + \alpha_4 State * Chain_{it} + \alpha_5 V_{it} + \alpha_6 CV_{it} + \alpha_7 Manown + \alpha_8 OutRate_{it} + \alpha_9 InsideRate_{it} + \alpha_{10} BoardSize + \alpha_{11} CEOChair + \alpha_{12} CFO_{it} + \alpha_{13} LnAsset_{it} + \alpha_{14} Growth + \alpha_{15-26} Ind_{it} + \varepsilon_{it}$$

	Fundamental	Debt	Ownership	Board	ALL
Lev		**02270**			**0.2180**
		(17.08)* **			**(16.17) *** **
State			**0.0637**		**0.0497**
			(3.43)* **		**(2.74) ** **
Chain			**0.0168**		**0.0115**
			(2.71) **		**(1.90) * **
State*Chain			**-0.0254**		**-0.0180**
			(-3.56)* **		**(-2.58) ** **
V			**-0.0009**		**-0.0006**
			(-5.41)* **		**(-3.92) *** **
CV			-0.0036		0.0053
			(-0.30)		(0.46)
Manown				**-0.0530**	**-0.0407**
				(-2.63) **	**(-2.07) ** **
OutRate				-0.0068	-0.0215
				(-0.19)	(-0.61)
InsideRate				-0.0209	-0.0181
				(-1.05)	(-0.93)
Boardsize				-0.0004	-0.0005
				(-0.36)	(-0.42)
CEOChair				0.0088	0.0036
				(1.06)	(0.45)
CFO	**0.7410**	**0.7619**	**0.7477**	**0.7419**	**0.7658**
	(32.13)* **	**(33.96) *** **	**(32.50)*** **	**(32.14)*** **	**(34.12) *** **
LnAsset	**-0.0174**	**-0.0211**	**-0.0148**	**-0.0167**	**-0.0192**
	(-6.39)* **	**(-7.97) *** **	**(-5.29)*** **	**(-5.97)*** **	**(-6.83) *** **
Growth	**-0.0390**	**-0.0391**	**-0.0380**	**-0.0391**	**-0.0381**
	(-8.50)* **	**(-8.77) *** **	**(-8.29)*** **	**(-8.50)*** **	**(-8.54)*** **
INDs	Control	Control	Control	Control	Control
N	4841	4841	4841	4841	4841
R-sq	0.1888	0.2459	0.2008	0.1899	0.2486
Incremental R-sq		0.0571	0.012	0.0011	0.0598

Note: 1. Con11 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Lev is the total debt ratio, equals to total liability divided

by total assets at year end; State is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise; Chain is the length of control chain from ultimate shareholder to listed firm; V is the voting right of ultimate shareholder, and CV is cash flow right divided by voting right; ManOwn is the ownership of management; OutRate is the rate of outside directors to the total directors in board; InsideRate is the rate of directors who are also management to the total directors in board; BoardSize is the total number of directors in board; CEOChair is a dummy variable, 1 indicate the CEO is also the chairman of the board; CFO is the cash flow from operation to total asset at year end; LnAsset is the natural log form of total asset at year end; Growth is the growth rate of revenue.

2. Regression model is the Panel Data Fixed Effect model; ***, **,* indicate significance in 0.01, 0.05, 0.10 levels respectively.

。

Table 4 Information Asymmetry, Agency Problem and Accounting Conservatism-Con11-SOEs

Regression Model:

$$Con_{it} = \alpha_0 + \alpha_1 Lev_{it} + \alpha_2 State_{it} + \alpha_3 Chain_{it} + \alpha_4 State * Chain_{it} + \alpha_5 V_{it} + \alpha_6 CV_{it} + \alpha_7 Manown + \alpha_8 OutRate_{it} + \alpha_9 InsideRate_{it} + \alpha_{10} BoardSize + \alpha_{11} CEOChair + \alpha_{12} CFO_{it} + \alpha_{13} LnAsset_{it} + \alpha_{14} Growth + \alpha_{15-26} Ind_{it} + \varepsilon_{it}$$

	Fundamental	Debt	Ownership	Board	ALL
Lev		**0.2248**			**0.2146**
		(15.20)* **			**(14.41)*** **
Chain			**-0.0082**		-0.0064
			(-1.90)*		(-1.52)
V			**-0.0008**		**-0.0006**
			(-4.82)* **		**(-3.63)*** **
CV			-0.0115		-0.0084
			(-0.79)		(-0.59)
Manown				**-0.0979**	**-0.0858**
				(-3.85)* **	**(-3.47)*** **
InsideRate				0.0306	0.0329
				(1.39)	(1.53)
OutRate				0.0288	0.0162
				(0.72)	(0.42)
Boardsize				-0.0005	-0.0006
				(-0.44)	(-0.49)
CEOChair				0.0055	0.0025
				(0.59)	(0.28)
CFO	**0.7294**	**0.7572**	**0.7339**	**0.7308**	**0.7610**
	(27.55)* **	**(29.41)*** **	**(27.80)*** **	**(27.62)*** **	**(29.59)*** **
LnAsset	**-0.0130**	**-0.0186**	**-0.0111**	**-0.0128**	**-0.0167**
	(-4.26)* **	**(-6.25)*** **	**(-3.58)*** **	**(-4.09)*** **	**(-5.34)*** **
Growth	**-0.0319**	**-0.0329**	**-0.0309**	**-0.0317**	**-0.0320**
	(-5.64)* **	**(-6.00)*** **	**(-5.49)*** **	**(-5.62)*** **	**(-5.83)*** **
INDs	Control	Control	Control	Control	Control
N	3695	3695	3695	3695	3695
R-sq	0.1830	0.2394	0.1931	0.1916	0.2489
Incremental R-sq		0.0564	0.0101	0.0086	0.0659

Note: 1. Con11 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Lev is the total debt ratio, equals to total liability divided by total assets at year end; State is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise; Chain is the length of control chain from ultimate shareholder to listed firm; V is the voting right of ultimate shareholder, and CV is cash flow right divided by voting right; ManOwn is the ownership of management; OutRate is the rate of outside directors to the

total directors in board; InsideRate is the rate of directors who are also management to the total directors in board; BoardSize is the total number of directors in board; CEOChair is a dummy variable, 1 indicate the CEO is also the chairman of the board; CFO is the cash flow from operation to total asset at year end; LnAsset is the natural log form of total asset at year end; Growth is the growth rate of revenue.

2. Regression model is the Panel Data Fixed Effect model; ***, **,* indicate significance in 0.01, 0.05, 0.10 levels respectively.

Table 5 Information Asymmetry, Agency Problem and Accounting Conservatism-Con11-NSOEs

Regression Model:

$$Con_{it} = \alpha_0 + \alpha_1 Lev_{it} + \alpha_2 State_{it} + \alpha_3 Chain_{it} + \alpha_4 State * Chain_{it} + \alpha_5 V_{it} + \alpha_6 CV_{it} + \alpha_7 Manown + \alpha_8 OutRate_{it} + \alpha_9 InsideRate_{it} + \alpha_{10} BoardSize + \alpha_{11} CEOChair + \alpha_{12} CFO_{it} + \alpha_{13} LnAsset_{it} + \alpha_{14} Growth + \alpha_{15-26} Ind_{it} + \varepsilon_{it}$$

	Fundamental	Debt	Ownership	Board	ALL
Lev		**0.2131**			**0.1981**
		(6.93)* **			**(6.35)*** **
Chain			**0.0172**		**0.0126**
			(2.30) **		**(1.73)***
V			**-0.0013**		**-0.0011**
			(-3.00)* **		**(-2.57)** **
CV			0.0067		0.0149
			(0.31)		(0.70)
Manown				0.0142	0.0222
				(0.40)	(0.65)
InsideRate				**-0.1902**	**-0.1754**
				(-4.21)	**(-3.96)*** **
OutRate				-0.1010	-0.1096
				(-1.20)	(-1.33)
Boardsize				0.0002	-0.0010
				(0.07)	(-0.35)
CEOChair				0.0205	0.0085
				(1.16)	(0.49)
CFO	**0.7805**	**0.7744**	**0.7876**	**0.7838**	**0.7832**
	(16.45)* **	**(16.66)*** **	**(16.67)*** **	**(16.61)*** **	**(16.96)*** **
LnAsset	**-0.0284**	**-0.0300**	**-0.0270**	**-0.0277**	**-0.0284**
	(-4.44)* **	**(-4.78)*** **	**(-4.23)*** **	**(-4.28)*** **	**(-4.46)*** **
Growth	**-0.0501**	**-0.0487**	**-0.0484**	**-0.0494**	**-0.0464**
	(-6.10)* **	**(-6.05)*** **	**(-5.91)*** **	**(-6.04)*** **	**(-5.78)*** **
INDs	Control	Control	Control	Control	Control
N	1146	1146	1146	1146	1146
R-sq	0.2228	0.2693	0.2357	0.2237	0.2757
Incremental R-sq		0.0465	0.0129	0.0009	0.0529

Note: 1. Con11 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Lev is the total debt ratio, equals to total liability divided by total assets at year end; State is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise; Chain is the length of control chain from ultimate shareholder to listed firm; V is the voting right of ultimate shareholder, and CV is cash flow right divided by voting right; ManOwn is the ownership of management; OutRate is the rate of outside directors to the

total directors in board; InsideRate is the rate of directors who are also management to the total directors in board; BoardSize is the total number of directors in board; CEOChair is a dummy variable, 1 indicate the CEO is also the chairman of the board; CFO is the cash flow from operation to total asset at year end; LnAsset is the natural log form of total asset at year end; Growth is the growth rate of revenue.

2. Regression model is the Panel Data Fixed Effect model; ***, **,* indicate significance in 0.01, 0.05, 0.10 levels respectively.

Table 6 Information Asymmetry, Agency Problem and Accounting Conservatism-Con12

Regression Model

$$Con_{it} = \alpha_0 + \alpha_1 Lev_{it} + \alpha_2 State_{it} + \alpha_3 Chain_{it} + \alpha_4 State * Chain_{it} + \alpha_5 V_{it} + \alpha_6 CV_{it} + \alpha_7 Manown + \alpha_8 OutRate_{it} + \alpha_9 InsideRate_{it} + \alpha_{10} BoardSize + \alpha_{11} CEOChair + \alpha_{12} CFO_{it} + \alpha_{13} LnAsset_{it} + \alpha_{14} Growth + \alpha_{15-26} Ind_{it} + \varepsilon_{it}$$

	ALL	SOEs	NSOEs
Lev	**0.1903**	**0.1809**	**0.1880**
	(13.79) ***	**(11.89) *****	**(5.89) *****
State	**0.0588**		
	(3.16) ***		
Chain	**0.0129**	-0.0072	**0.0112**
	(2.08) **	(-1.13)	**(1.72)***
State*chain	**-0.0210**		
	(-2.95) ***		
V	**-0.0004**	**-0.0004**	**-0.0012**
	(-2.74) ***	**(-2.32) ****	**(-2.59) ****
CV	0.0021	-0.0040	0.0001
	(0.18)	(-0.28)	(0.00)
Manown	**-0.0439**	**-0.0887**	0.0228
	(-2.18) ***	**(-3.51) *****	(0.65)
InsideRate	-0.0179	0.0359	**-0.1834**
	(-0.90)	(1.64)	**(-4.04) *****
OutRate	-0.0160	0.0209	-0.1112
	(-0.44)	(0.53)	(-1.32)
Boardsize	0.0009	0.0010	-0.0009
	(0.76)	(0.82)	(-0.30)
CEOChair	0.0060	0.0049	0.0124
	(0.73)	(0.53)	(0.70)
CFO	**0.8597**	**0.8716**	**0.8348**
	(37.41) ***	**(33.16) *****	**(17.66) *****
LnAsset	**-0.0129**	**-0.0099**	**-0.0248**
	(-4.47) ***	**(-3.09) *****	**(-3.82) *****
Growth	**-0.0372**	**-0.0292**	**-0.0486**
	(-8.14)***	**(-5.22) *****	**(-5.92) *****
INDs	Control	Control	Control
N	4841	3695	1146
R-sq	0.2871	0.2954	0.3006

Note: 1. Con12 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings after extra-ordinary items deduct cash flow from operation, and then divided by total assets at year end; Lev is the total debt ratio, equals to total liability divided by total assets at year end; State is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise; Chain is the length of control chain from ultimate shareholder to listed firm; V is the voting right

of ultimate shareholder, and CV is cash flow right divided by voting right; ManOwn is the ownership of management; OutRate is the rate of outside directors to the total directors in board; InsideRate is the rate of directors who are also management to the total directors in board; BoardSize is the total number of directors in board; CEOChair is a dummy variable, 1 indicate the CEO is also the chairman of the board; CFO is the cash flow from operation to total asset at year end; LnAsset is the natural log form of total asset at year end; Growth is the growth rate of revenue.

2. Regression model is the Panel Data Fixed Effect model; ***, **,* indicate significance in 0.01, 0.05, 0.10 levels respectively.

.

Table 7 Information Asymmetry, Agency Problem and Accounting Conservatism-Based on Earning before extra-ordinary items

Regression Model:

$$Con_{it} = \alpha_0 + \alpha_1 Lev_{it} + \alpha_2 State_{it} + \alpha_3 Chain_{it} + \alpha_4 State * Chain_{it} + \alpha_5 V_{it} + \alpha_6 CV_{it} + \alpha_7 Manown + \alpha_8 OutRate_{it} + \alpha_9 InsideRate_{it} + \alpha_{10} BoardSize + \alpha_{11} CEOChair + \alpha_{12} CFO_{it} + \alpha_{13} LnAsset_{it} + \alpha_{14} Growth + \alpha_{15-26} Ind_{it} + \varepsilon_{it}$$

	Con21			Con22		
	ALL	SOEs	NSOEs	ALL	SOEs	NSOEs
Lev	**0.1761**	**0.2105**	**0.1578**	**0.1761**	**0.1763**	**0.1472**
	(13.55) ***	**(14.81) *****	**(5.57) *****	**(13.55) *****	**(12.15) *****	**(5.04) *****
State	**0.0622**			**0.0622**		
	(3.55) ***			**(3.55) *****		
Chain	**0.0160**	-0.0045	**0.0169**	**0.0160**	-0.0053	**0.0156**
	(2.73) ***	(-1.11)	**(2.54) *****	**(2.73) *****	(-1.28)	**(2.28) *****
State*chain	**-0.0218**			**-0.0218**		
	(-3.25) ***			**(-3.25) *****		
V	**-0.0003**	**-0.0005**	**-0.0008**	**-0.0003**	**-0.0003**	**-0.0008**
	(-2.01) **	**(-3.08) *****	**(-1.96) ***	**(-2.01) ****	**(-1.76) ***	**(-2.00) ****
CV	0.0069	-0.0049	0.0235	0.0069	-0.0009	0.0088
	(0.62)	(-0.36)	(1.22)	(0.62)	(-0.07)	(0.44)
Manown	**-0.0373**	**-0.0742**	0.0249	**-0.0373**	**-0.0770**	0.0254
	(-1.97) *	**(-3.14) *****	(0.80)	**(-1.97) ***	**(-3.19) *****	(0.79)
InsideRate	-0.0248	0.0151	**-0.1467**	-0.0248	0.0175	**-0.1547**
	(-1.32)	(0.74)	**(-3.64) *****	(-1.32)	(0.84)	**(-3.73) *****
OutRate	-0.0131	0.0075	-0.0728	-0.0131	0.0113	-0.0741
	(-0.39)	(0.20)	(-0.97)	(-0.39)	(0.30)	(-0.96)
Boardsize	0.0007	-0.0007	-0.0013	0.0007	0.0009	-0.0013
	(0.65)	(-0.62)	(-0.51)	(0.65)	(0.76)	(-0.48)
CEOChair	0.0077	0.0061	0.0054	0.0077	0.0085	0.0098
	(0.99)	(0.71)	(0.34)	(0.99)	(0.96)	(0.60)
CFO	**0.8595**	**0.7512**	**0.8053**	**0.8595**	**0.8623**	**0.8538**
	(39.72) ***	**(30.62) *****	**(19.19) *****	**(39.72) *****	**(34.41) *****	**(19.74) *****
LnAsset	**-0.0173**	**-0.0204**	**-0.0357**	**-0.0173**	**-0.0134**	**-0.0323**
	(-6.38) ***	**(-6.82) *****	**(-6.18) *****	**(-6.38) *****	**(-4.41) *****	**(-5.42) *****
Growth	**-0.0283**	**-0.0227**	**-0.0390**	**-0.0283**	**-0.0199**	**-0.0409**
	(-6.57) ***	**(-4.34) *****	**(-5.35) *****	**(-6.57) *****	**(-3.73) *****	**(-5.44)*****
INDs	Control	Control	Control	Control	Control	Control
N	4841	3695	1146	4841	3695	1146
R-sq	0.3015	0.2557	0.3086	0.3015	0.3013	0.3297

Note: 1. Con21 is three years cumulative accruals multiply by -1, accruals for each year equal to earnings before extra-ordinary items plus depreciation and deduct cash flow from operation, and then divided by total assets at year end; Con22 is also three years cumulative accruals multiply by -1, but each year accrual equals to net income before extra-ordinary items deduct cash flow from

operation, and then divided by total asset at year end; Lev is the total debt ratio, equals to total liability divided by total assets at year end; State is a dummy variable, 1 indicates the ultimate shareholder is government, 0 otherwise; Chain is the length of control chain from ultimate shareholder to listed firm; V is the voting right of ultimate shareholder, and CV is cash flow right divided by voting right; ManOwn is the ownership of management; OutRate is the rate of outside directors to the total directors in board; InsideRate is the rate of directors who are also management to the total directors in board; BoardSize is the total number of directors in board; CEOChair is a dummy variable, 1 indicate the CEO is also the chairman of the board; CFO is the cash flow from operation to total asset at year end; LnAsset is the natural log form of total asset at year end; Growth is the growth rate of revenue.

2. Regression model is the Panel Data Fixed Effect model; ***, **,* indicate significance in 0.01, 0.05, 0.10 levels respectively.