

How does Corporate Governance Affect Earnings Management in China?: In the View of Financial Monitoring

FANG Fang
GAO Minghua
DONG Weijia

This paper investigates the relationship between financial monitoring and earnings management of Chinese listed companies. We find that the improvement of financial monitoring can significantly reduce the extent of earnings management of listed companies, and this effect is mainly related to the role of financial supervision and financial incentive functions. Meanwhile, the financial control function can significantly reduce the practice of conducting upward earnings management. After considering the nature of ownership, we find that, compared with state-owned listed companies, there is a stronger correlation between financial monitoring and the magnitude of earnings management of non-state-owned listed companies.

I. Introduction

Due to the agency problem and information asymmetry that exist between the ownership and management of modern companies, agents who have information superiority tend to manipulate reported earnings for their own benefit, which greatly reduces the efficiency and effectiveness of that firm's accounting information, resulting in a mismatch of social resources and weakening the function of capital markets to optimize resource allocation (Gu, 2012). In theory, one of the core objectives of corporate governance is to reasonably assure the quality of financial information. Sound corporate governance achieved through rational allocation of property rights, effective financial control, supervision

and motivation can greatly inhibit a company's management practice of manipulating reported earnings.

Studying the effect of corporate governance on earnings management from the perspective of financial monitoring of listed companies has important theoretical and practical significance. Whether the ability of the corporate governance mechanism can inhibit earnings management directly affects the science and rationality of the activities around corporate governance. Most empirical studies to date have focused on one or a few characteristic variables of corporate governance, and this paper focuses on the overall corporate governance mechanism directly related to financial monitoring, and based on a systematic and comprehensive financial monitoring indicators

system, from the perspective of earnings management to explore the effect of governance to induce company management and to refrain from opportunistic behavior¹⁾. Because the nature of ownership will not only affect the effectiveness of corporate governance but may also have an important impact on earnings management behavior of listed companies, this paper will also examine the role of the nature of ownership on the relationship between financial monitoring and earnings management.

II. Literature review and hypotheses development

Accounting earnings affect stakeholders' decision-making, as stakeholder parties tend to use earnings data to compare to their accounting earnings expectations and encourage other parties to make decisions in their favor. Earnings management is the product of the conflicts of interest among the various stakeholders of a firm. As a basic institutional expectation of contemporary firms, the main purpose of corporate governance is to ease principal-agent problems, to reduce agency costs, and to coordinate the interests among various stakeholders. Therefore, the effectiveness of corporate governance should have some impact on earnings management behavior (Yu, 2011).

Financial monitoring, as a subsystem

of corporate governance, sets financial authority as its governance objective and financial covenants as its governance tool, which supersede the institutional expectations among all relevant stakeholders, and function as both incentive and restraint mechanisms to preserve the fundamental interests of a firm's stakeholders (Li, 2010). Some scholars believe that the goal of financial monitoring is to eliminate the information asymmetry that exists between internal and external stakeholders and to balance the interests between them (Yao & He, 2003). Due to the presence of asymmetric disparities among the various stakeholders of a company, the basic approach of these parties is to use their financial rights in preparing, reporting or reviewing financial statements. Accordingly, the essence of financial monitoring is to regulate the process of generating financial information and the associated reporting mechanisms, ensure the quality of financial information, allocate and reallocate the financial rights of various stakeholders, etc. (Gao et al., 2011). Based on the above analysis, we believe that as an important part of corporate governance, financial monitoring plays a direct and major role in safeguarding the company's accounting information quality.

In this paper, financial monitoring consists of four components: financial rights allocation, financial control, financial

supervision and financial incentives. Overall, if a firm has taken appropriate and feasible control measures related to these four aspects, shareholders and creditors are better able to limit the powers of management, prevent the occurrence of management's "adverse selection" and "moral hazard" opportunities, secure the implementation of comprehensive financial accounting information quality control, and enhance the reliability and authenticity of accounting information. From the view of the four sub-governance mechanisms of financial monitoring, fair financial rights allocation allows for a separation of powers within the company, which can prevent autocratic management and protect the legitimacy and transparency of financial activities to reduce the likelihood of the occurrence of financial information mistakes and fraud; furthermore fair financial rights also allow implementation of sound financial control procedures, which can ensure the validity and compliance of the financial information generation process, thereby improving the authenticity and accuracy of financial statements. Effective financial supervision can provide a favorable institutional environment and effective restraint mechanisms, from both internal and external aspects, and improve the transparency of financial information. Reasonable and appropriate financial incentives will be able to effectively stimulate support from

stakeholders and reduce moral hazards, thereby restricting earnings management behavior. Accordingly, we propose the following hypotheses:

H1: The level of financial monitoring is positively related to the degree of earnings management.

Under the special system background of China, there are significant differences between state-owned companies and non-state-owned companies. Relative to the non-state-owned companies, state-owned companies can receive more financial and political support from the government (Qian, 1994). Government leaders have an incentive to help state-owned companies because the success of those firms can bring more resources for local development and thereby improve their political capital and promote opportunities (Li and Zhou, 2005). Therefore, compared to non-state-owned companies, state-owned organizations will incur fewer financing constraints, which will weaken the earnings manipulation motives that arise from debt covenants and the needs of capital market financing. Meanwhile, the State-owned Assets Supervision and Administration Commission (SASAC)'s quota regulation on executives' compensation for state-owned companies also reduces the incentives for earnings management. The differences in terms of earnings management incentives between state-owned companies and non-state-owned companies is that under the same

conditions, the degree of earnings management for state-owned companies will be relatively lower than that of non-state-owned companies. Because the overall level of financial monitoring of non-state-owned companies is lower, improvement of financial monitoring of these companies may lead to a significantly more inhibitory effect on earnings management practices of those firms. The assumptions from this hypothesis give rise to the second hypothesis:

H2: The nature of ownership of non-state-owned companies will enhance the relationship between financial monitoring and earnings management.

III. Methodology

3.1 Measurement of earnings management

There are different ways to measure the degree of earnings management that was used in previous studies, such as timeliness, smoothness and persistence (Hunt et al., 1996 and Lev and Thiagarajan, 1993). However, these methods do not measure the earnings management of individual companies. To capture the level of earnings management for individual companies, we adopt the value of discretionary accruals (DA), which is measured by the difference between total accruals (TA) and non-discretionary accruals (NDA). Among various measures of earnings management, DA is one of the most commonly

used measures in existing studies (Dechow et al., 2010). We follow previous studies by using a cross-sectional Modified Jones Model to estimate the magnitude of earnings management (Dechow et al., 1995 and Kothari et al., 2005).²⁾ The estimation model is as follows:

$$TA_{it}/A_{it-1} = \alpha_i [1/A_{it-1}] + \beta_{1i} [(\Delta REV_{it} - \Delta REC_{it})/A_{it-1}] + \beta_{2i} [(PPE_{it}/A_{it-1})] + \xi_{it}, \quad (1)$$

where TA denotes total accruals, A is asset, REV denotes annual revenue, REC represents accounting receivables, PPE refers to property of permanent equipment, and subscripts i and t represent firm and year, respectively.

We compute TA as post-tax operating profit minus net cash-flow from operating activities³⁾. To ensure comparability, every variable is divided by the total assets at the beginning of the year. To estimate NDA, we estimate Equation (1) for firms in the same industry. Hribar and Nichols (2007) suggest that this method may lead to inaccurate conclusions if we only consider the extent of earnings management but not their direction. To address this issue, we adopt the absolute value of discretionary accruals (named ABSDA) to represent the extent of earnings management and the relative value (named DA) to represent the direction of earnings management. The larger ABSDA, the higher the degree of earnings management. A company with a

positive DA indicates that it uses methods that suggest favorable earnings (upward earnings management) while a negative DA represents downward earnings management.

3.2 Research Design

To test hypothesis 1, we set the following research model:

$$DA_{it} \text{ or } ABSDA_{it} = \alpha + \beta FM_{it} + \varphi Controls_{it} + Industry_{it} + \xi_{it}, \quad (2)$$

where DA and ABSDA represent the extent and direction of earnings management, respectively, and FM refers to the level of corporate governance on financial monitoring. Based on the definition above, it can be further broken down into four sub-indices: (1) financial rights allocation (FA), (2) financial control (FC), (3) financial supervision (FS) and (4) financial incentives (FI).

We set up five control variables: (1) company size (Size), represented by the natural logarithm of total assets at the end of year; (2) financial leverage (Lev), computed as the total assets at the end of the year divided by the total liabilities at the end of the year; (3) company's growth (MB), calculated as the year-end market value of the company divided by the book value of the company's net assets; (4) the first largest shareholding ratio (Top1); and (5) profitability, denoted as return on assets (ROA).

Existing research suggests the following. (1) The larger the company is, the

more likely it will be subject to more oversight and concern from government departments, institutional investors, securities analysts and investors. This condition may make these firms more inclined to provide more information to the public than they otherwise might be, resulting in a greater cost of implementing earnings manipulation practices (Rajan & Zingdes, 1995; Dechow & Dichev, 2002). Therefore, there may be a negative correlation between company size and earnings management. (2) Debt covenants may encourage enterprises to implement upward earnings manipulation, as companies with mandatory provisions incorporated into loan contracts usually have high discretionary accruals (Defond & Jiambalvo, 1994; Sweeney, 1994). (3) Companies with higher growth opportunities are more likely to achieve profit target through earnings management (Klein, 2002; Matsumoto, 2002; Cheng & Warfield, 2005). (4) Higher first largest shareholding ratios result in stronger motivation and ability to manipulate earnings. (Fan & Wong, 2002; Ming et al., 2003; Meng et al., 2006; Wang et al., 2006; Zhang, 2010). (5) Dechow et al. (1995) argue that the return on total assets should be controlled for the impact of firm performance on earnings management when the discretionary accrual is related to the firm's performance. Lei et al. (2006) found that the return on total assets has a positive relation with

Table 1 Variables definition

Variables	Definition
Size	the natural logarithm of total assets at the end of the year
Lev	the ratio of total liabilities at the end of the year to total assets at the end of the year
MB	the book value of the company's net assets divided by the year-end market value of the company
Top1	the first largest shareholding ratio
ROA	return on total assets
NonSOE	dummy variable of the nature of ownership that takes a value of 1 if it is a non-state-owned company and zero otherwise.
FM	the level of financial monitoring
FA	the level of financial rights allocation
FC	the level of financial control
FS	the level of financial supervision
FI	the level of financial incentives

earning management. We also controlled for the industry factor in the model.

To test hypothesis 2, we further add in model 2, a cross-term of NonSOE and FM:

$$DA_{it} \text{ or } ABSDA_{it} = \alpha + \beta FM_{it} + \varphi Controls_{it} + \gamma NonSOE_{it} + \delta NonSOE_{it} \times FM_{it} + Industry_{it} + \xi_{it}, \quad (3)$$

where NonSOE represents the dummy variable of the nature of ownership that takes a value of 1 if it is a non-state-owned company and zero otherwise.

The variables we use are summarized in table 1.

3.3 Definitions of financial monitoring index

We adopt the financial monitoring data published by “Chinese listed companies’ financial governance index report (2013)” (Gao et al., 2013), which includes the overall score and four sub-index scores. The evaluation system of these indices is as follows.

3.4 Sample selection and data sources

We chose all companies listed on the Chinese A-share market during the year 2012. Consistent with similar studies, we excluded financial companies and compa-

Table 2 Evaluation system of financial monitoring

First-level index	Second-level index	Evaluation criterion
Financial rights allocation	1. Are related party transactions approved by company shareholders?	Yes (1 point); No (0 points)
	2. Are directors’ compensation and top management’s stock options approved by company shareholders?	Yes (1 point); No (0 points)
	3. Separation degree of two rights ⁽¹⁾	Cash flow rights/control rights

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	4. Does the board of directors set clear financial goals?	Yes (1 point); No (0 points)
	5. Is there an explicit communication mechanism between internal directors and outside directors?	Yes (1 point); No (0 points)
	6. Is the proportion of independent directors greater than 50%?	Yes (1 point); No (0 points)
	7. Is there an expert in finance or accounting among the independent directors?	Yes (1 point); No (0 points)
	8. Are the functions of the board chairman and general manager separated?	Yes (1 point); No (0 points)
	9. Does the Chief Financial Officer (CFO) have a senior title or related qualifications?	Yes (1 point); No (0 points)
Financial control	10. Do the board or shareholders assess the internal controls in a timely manner?	Yes (1 point); No (0 points)
	11. Do committees play a role in the internal control?	Yes (1 point); No (0 points)
	12. Do the board or shareholders disclose the specific internal control measures?	Detailed disclosure (1 point); General disclosure (0.5 points); No disclosure (0 points)
	13. What is the status of the risk control committee?	Set with more than 2/3 independent directors (1 point); Set with less than 2/3 independent directors (0.5 points); Does not set (0 points).
	14. Is financial elasticity ⁽²⁾ better than sample median?	Yes (1 point); No (0 points)
	15. Is the level of dependence on external financing ⁽³⁾ lower than sample median?	Yes (1 point); No (0 points)
	16. Is the foreseeable financial risk disclosed?	Yes (1 point); No (0 points)
	17. Is the company an ST company?	Yes (1 point); No (0 points)
Financial supervision	18. What is the proportion of independent directors on the audit committee?	Set with 100% independent directors (1 point); Set with less than 100% independent directors (0.5 points); Does not set (0 points).
	19. Is the audit opinion unqualified?	Yes (1 point); No (0 points)
	20. Is the annual report of the current year disclosed on the company's web site?	Yes (1 point); No (0 points)
	21. Are the annual reports for the prior 3 years disclosed on the company's web site?	Yes (1 point); No (0 points)
	22. Is development prospect related information disclosed?	Yes (1 point); No (0 points)
	23. Are related party transactions disclosed?	Yes (1 point); No (0 points)
	24. Are explanations given when accounting policies change?	No accounting change (1 point); Changed with explanation (0.5 points); Changed with no explanation (0 points).

	25. Has the company been publicly criticized, condemned, or received administrative penalties by CSRC or stock exchange institutions, etc. due to non-compliance?	Yes (1 point); No (0 points)
	26. Does the company distribute cash dividends in a timely manner?	Yes (1 point); No (0 points)
	27. Has management compensation been properly paid ⁽⁴⁾ ?	Yes (1 point); No (0 points)
Financial incentives	28. What is the proportion of independent directors on the compensation committee?	Set with more than 1/2 independent directors (1 points); Set with less than 1/2 independent directors (0.5 points); Does not set (0 points).
	29. Does company adopt stock option incentives?	Yes (1 point); No (0 points)
	30. Is the employee compensation growth rate not less than the company's revenue growth rate?	Yes (1 point); No (0 points)

Note: (1) Similar to La Porta, Lopez-de-Silanes & Shleifer (1999), we track back the control chain of the listed company to identify the ultimate controller. The separation degree of two rights is the ratio of ownership and control rights. Control rights, also known as voting rights, represent the weakest link in the control chain; Ownership is also called cash flow rights, expressed by the product of the ownership ratio on the control chain. (2) It was calculated as “the net cash flow from operating activities / total assets”. (3) The level of dependence on external financing is represented by (investing cash outflow - operating cash outflow)/investing cash outflow. (4) This was determined according to the results of “Chinese listed companies’ management compensation index report (2013)” (Gao et al., 2013). This report calculated the ratio of adjusted managements’ compensation to operating income as the evaluation criteria of compensation reasonableness. The 1/4 quartile method is used to classify all listed companies into three categories: insufficient incentives, proper incentives and excess incentives. If the management compensation is classified as proper incentives, it would be determined to have been properly paid.

nies without necessary data. As a result of these procedures, 2,205 observations were adopted as our final sample. Financial monitoring data, including financial rights allocation to the sub-index (FA), financial control of the sub-index (FC), financial supervision of the sub-index (FS) and financial incentives of the sub-index (FI), are obtained from the “Chinese listed companies’ financial governance index report (2013)” (Gao et al., 2013). All data are from the annual financial reports of the listed companies. Other financial data are from the WIND database.

IV. Empirical Analysis

4.1 Descriptive statistics

Table 3 presents the summary statistics for all variables. It shows that in 2012, the financial monitoring of Chinese A-share listed companies is of poor quality, whether they are state-owned listed companies or non-state-owned listed companies. The average of the financial monitoring indices (FM) are all below 60 points. However, the financial monitoring level of non-state-owned listed companies is significantly lower than that of state-owned listed companies. From the view

Table 3 Descriptive Statistics

	Variable	Obs	Mean	P50	Max	Min	SD
State-owned Companies	ABSDA	908	0.057	0.042	0.475	0.000	0.056
	DA	908	-0.013	-0.015	0.475	-0.464	0.078
	FM	908	59.970	60.130	81.150	35.980	7.879
	FA	908	54.650	55.560	100.000	4.443	13.050
	FC	908	61.910	62.500	100.000	12.500	14.000
	FS	908	78.240	81.250	100.000	31.250	12.670
	FI	908	44.320	50.000	90.000	0.000	18.000
	Size	908	9.768	9.671	12.340	8.139	0.600
	Lev	908	0.527	0.543	1.223	0.016	0.202
	MB	908	2.649	1.935	81.850	-22.750	4.473
	Top1	908	39.940	39.620	86.350	3.620	15.890
ROA	908	3.712	2.942	35.070	-18.410	5.189	
Non- state-owned Companies	ABSDA	1297	0.062	0.044	1.810	0.000	0.088
	DA	1297	-0.003**	-0.011	1.810	-0.724	0.108
	FM	1297	56.020***	56.260	78.780	25.160	8.417
	FA	1297	47.040***	44.440	88.890	6.444	12.920
	FC	1297	54.150***	56.250	87.500	0.000	17.390
	FS	1297	75.800***	68.750	100.000	37.500	12.640
	FI	1297	50.890***	50.000	100.000	0.000	19.250
	Size	1297	9.310	9.261	10.970	6.831	0.457
	Lev	1297	0.380	0.350	10.080	0.014	0.346
	MB	1297	3.473	2.226	263.600	-14.510	9.286
	Top1	1297	34.130	31.430	89.410	2.197	15.010
ROA	1297	4.957	4.146	109.000	-105.200	7.724	

Notes: This table reports descriptive statistics for all variables. *Obs*: sample size. *Mean*: sample average. *Min*: sample minimum value. *P50*: sample median. *Max*: sample maximum value. *SD*: sample standard deviation. *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

of the sub-index, the level of financial rights allocation (FA), financial control (FC) and financial supervision (FS) of state-owned companies were significantly higher than that of non-state-owned listed companies; while financial incentives (FI) levels were significantly lower than that of non-state-owned listed companies. In addition, the degree of earnings management of state-owned listed companies is significantly lower than that of non-state-owned listed companies. Compared with non-state-owned listed companies, the likelihood of conducting

upward earnings management is significantly reduced.

Table 4 illustrates the correlation coefficient between variables. The correlation coefficient between the extent of earnings management (ABSDA) and the financial monitoring index (FM) is -0.096, and that between the direction of earnings management (DA) and the financial monitoring index (FM) is -0.110; both are significant at the 1% level, suggesting that there is a negative correlation between the level of earnings management (including the extent and direction) and

Table 4 Correlation Coefficient Matrix (1)

	ABSDA	DA	FM	FA	FC	FS	FI
ABSDA	1						
DA	0.355***	1					
FM	-0.096***	-0.110***	1				
FA	-0.028	-0.009	0.610***	1			
FC	-0.013	-0.208***	0.644***	0.133***	1		
FS	-0.087***	-0.016	0.492***	0.118***	0.097***	1	
FI	-0.111***	0.025	0.426***	-0.067***	0.032	0.112***	1
Size	-0.074***	-0.074***	0.337***	0.221***	0.280***	0.216***	0.002
Lev	0.224***	-0.133***	0.027	0.120***	0.121***	-0.047**	-0.209***
MB	0.108***	0.118***	-0.168***	-0.0568***	-0.108***	-0.104***	-0.114***
Top1	-0.005	-0.040*	0.142***	0.082***	0.119***	0.084***	0.020
ROA	0.169***	0.400***	0.060***	-0.033	0.011	0.030	0.152***
NonSOE	0.036*	0.053**	-0.231***	-0.278***	-0.231***	-0.095***	0.170***

Table 4 Correlation Coefficient Matrix (2)

	Size	Lev	MB	Top1	ROA	NonSOE
Size	1					
Lev	0.302***	1				
MB	-0.241***	0.0254	1			
Top1	0.284***	0.027	-0.065***	1		
ROA	-0.030	-0.421***	0.144***	0.042**	1	
NonSOE	-0.398***	-0.238***	0.053**	-0.183***	0.090***	1

Note: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

the (FM)Financial monitoring Index. This result is consistent with our predictions. We further introduce the control variables and use regression models to evaluate the specific effects of financial monitoring on the level of earnings management.

4.2 Empirical results and analysis

4.2.1 Financial monitoring and earnings management

Table 5 reports the OLS regression results for hypothesis 1. Table 5a shows the result of the impact of financial monitoring on the extent of earnings management (ABSDA). Table 5b indicates the impact of financial monitoring

on the direction of earnings management (DA). In the two tables, we report the regression results of the financial monitoring index (in column 1) and four sub-indices (in column 2-5) as the independent variables.

Table 5a shows that the regression coefficient of the financial monitoring index (FM) is -0.0007, which is at the 1% significance level, indicating that there is a significant negative correlation between financial monitoring and the degree of earnings management. Furthermore, because the degree of earnings management has a negative and significant coefficient in the regressions of financial supervision (FS) and financial incentives (FI) yet no

Table 5a Regression results of financial monitoring and earnings management degree (ABSDA)

	(1)	(2)	(3)	(4)	(5)
FM	-0.0007***				
	(-3.666)				
FA		-0.0002			
		(-1.532)			
FC			-0.0001		
			(-0.915)		
FS				-0.0002**	
				(-1.979)	
FI					-0.0003***
					(-3.873)
Size	-0.0234***	-0.0259***	-0.0261***	-0.0254***	-0.0264***
	(-7.457)	(-8.449)	(-8.469)	(-8.233)	(-8.795)
Lev	0.1068***	0.1080***	0.1079***	0.1063***	0.1042***
	(18.393)	(18.550)	(18.510)	(18.190)	(17.767)
MB	-0.0001	-0.0000	-0.0000	-0.0000	-0.0001
	(-0.451)	(-0.096)	(-0.138)	(-0.162)	(-0.519)
Top1	0.0001	0.0001	0.0001	0.0001	0.0001
	(1.395)	(1.264)	(1.264)	(1.260)	(1.270)
ROA	0.0039***	0.0039***	0.0038***	0.0038***	0.0039***
	(15.841)	(15.605)	(15.629)	(15.593)	(15.933)
Constant	0.2641***	0.2560***	0.2545***	0.2617***	0.2663***
	(7.736)	(7.501)	(7.454)	(7.633)	(7.797)
Obs	2205	2205	2205	2205	2205
R ²	17.05	16063	16.57	16.69	17.11
F	18.42	17.90	17.83	17.98	18.49

Note: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

significant relation with financial rights allocation (FA) and financial control (FC), we interpret these results to indicate that the governance mechanism of financial supervision and financial incentives plays a key role in reducing the extent of earnings management.

The regression coefficient of firm size (Size) is also negative and significant at the 1% level, indicating that the larger the firm scale, the lower the earnings management level is. The regression coefficient of the financial leverage (Lev) and the return on total assets (ROA) is positive, which is at the 1% significance level,

indicating that more debt and higher profitability may lead to a higher degree of earnings management. These results are consistent with expectations.

In Table 5b, the first column shows that financial monitoring index (FM)'s regression coefficient is -0.0014, which is at the 1% significance level, suggesting that there is a significant and negative relation between financial monitoring and the direction of earnings management. Thus, the higher the level of financial monitoring of a company, the less likely it will be to execute earnings management to report increased profits.

Furthermore, the financial control sub-index (FC) has a significant and negative relationship with the direction of earnings management (DA), indicating that the governance mechanism of financial control can significantly inhibit a company's upward earnings management.

A company size's regression coefficient is significantly negative at the 1% level, suggesting that the larger the scale, the higher the possibility of conducting downward earnings management. Meanwhile, the regression coefficients of financial leverage (Lev) and profitability (ROA) are in the 1% or 5% significance

level and are positive, indicating that firms with large amounts of corporate debt or higher profitability, are more likely to practice upward earnings management. Company Growth (MB)'s regression coefficient is significantly positive at the 5% or 10% level, revealing that better growth may result in upward earnings management. These results are consistent with expectations. In addition, the first largest shareholding ratio (Top1)'s regression coefficient is at the 5% or 10% significance level and is negative, which is not in agreement with expectations. This may be because most of

Table 5b Regression results of financial monitoring and earnings management direction (DA)

	(1)	(2)	(3)	(4)	(5)
FM	-0.0014***				
	(-6.058)				
FA		0.0001			
		(0.632)			
FC			-0.0013***		
			(-10.753)		
FS				-0.0001	
				(-0.433)	
FI					-0.0001
					(-1.217)
Size	-0.0033	-0.0106***	-0.0017	-0.0098**	-0.0101***
	(-0.842)	(-2.738)	(-0.437)	(-2.514)	(-2.642)
Lev	0.0182**	0.0196***	0.0248***	0.0195***	0.0185**
	(2.490)	(2.659)	(3.444)	(2.634)	(2.484)
MB	0.0003	0.0005*	0.0003	0.0005*	0.0004*
	(1.202)	(1.814)	(1.183)	(1.788)	(1.659)
Top1	-0.0002*	-0.0002*	-0.0002	-0.0002*	-0.0002*
	(-1.683)	(-1.957)	(-1.551)	(-1.936)	(-1.931)
ROA	0.0061***	0.0059***	0.0061***	0.0060***	0.0060***
	(19.399)	(18.913)	(19.931)	(18.905)	(18.950)
Constant	0.0250	0.0057	-0.0010	0.0081	0.0108
	(0.582)	(0.133)	(-0.023)	(0.187)	(0.249)
Obs	2205	2205	2205	2205	2205
R ²	18.10	16.73	20.91	16.72	16.77
F	19.73	18.03	23.42	18.02	18.08

Note: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

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the high first largest shareholder ratio companies are state-owned listed companies whose earnings management motivation is weak, and this thus leads to a negative relationship with DA.

4.2.2 Nature of ownership, financial monitoring and earnings management

Table 6 shows the test results of hypothesis 2. Table 6a indicates the regression results of the earnings management

degree and table 6b is the regression results of the earnings management direction. From the first column of table 6a, we can observe that the coefficient of the cross-term of NonSOE and the FM is not significant. However, in column (3) we can observe a significant and negative coefficient on the cross-term of NonSOE and FC (financial control). This result suggests that the negative relationship between financial control and earnings

Table 6a Regression results of the Nature of ownership, financial monitoring and earnings management degree (ABSDA)

	(1)	(2)	(3)	(4)	(5)
NonSOE	0.0372* (1.682)	0.0092 (0.735)	0.0324*** (2.615)	0.0145 (0.778)	0.0088 (1.036)
FM	-0.0003 (-1.052)				
NonSOE×FM	-0.0005 (-1.508)				
FA		-0.0001 (-0.501)			
NonSOE×FA		-0.0001 (-0.356)			
FC			0.0002 (1.461)		
NonSOE×FC			-0.0005** (-2.262)		
FS				-0.0002 (-0.885)	
NonSOE×FS				-0.0001 (-0.487)	
FI					-0.0003** (-2.574)
NonSOE×FI					-0.0000 (-0.104)
Size	-0.0223*** (-6.830)	-0.0246*** (-7.692)	-0.0244*** (-7.580)	-0.0238*** (-7.344)	-0.0240*** (-7.536)
Lev	0.1075*** (18.417)	0.1088*** (18.604)	0.1088*** (18.595)	0.1073*** (18.249)	0.1053*** (17.911)
MB	-0.0001 (-0.485)	-0.0000 (-0.054)	-0.0000 (-0.122)	-0.0000 (-0.113)	-0.0001 (-0.472)
Top1	0.0001 (1.474)	0.0001 (1.358)	0.0001 (1.354)	0.0001 (1.398)	0.0001 (1.478)
ROA	0.0039*** (15.762)	0.0039*** (15.536)	0.0039*** (15.536)	0.0039*** (15.511)	0.0039*** (15.880)

Constant	0.2286***	0.2365***	0.2149***	0.2372***	0.2381***
	(5.917)	(6.447)	(5.769)	(6.333)	(6.488)
Obs	2205	2205	2205	2205	2205
R ²	17.12	16.63	16.79	16.72	17.24
F	17.26	16.70	16.88	16.81	17.40

Note: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

management of non-state-owned listed companies is much stronger than that of state-owned listed companies. To some extent, the empirical results support the suggestion in hypothesis 2 that compared with state-owned listed companies higher financial control levels for non-state-owned companies correspond with their ability to more effectively inhibit the extent of earnings management.

In the first column of table 6b, no sig-

nificant negative coefficient of the cross-term of NonSOE and FM is present. However, in column (5) we can observe a significant and negative coefficient on the cross-term of NonSOE and FI (financial incentives). This suggests that the negative relationship between financial incentives and earnings management of non-state-owned listed companies is much stronger than that of state-owned listed companies. To some extent, the empirical

Table 6b Regression results of the Nature of ownership, financial monitoring and earnings management direction (DA)

	(1)	(2)	(3)	(4)	(5)
NonSOE	0.0353 (1.266)	-0.0017 (-0.108)	-0.0180 (-1.170)	0.0071 (0.298)	0.0234** (2.159)
FM	-0.0011*** (-2.807)				
NonSOE×FM	-0.0007 (-1.433)				
FA		0.0001 (0.317)			
NonSOE×FA		0.0000 (0.095)			
FC			-0.0014*** (-6.824)		
NonSOE×FC			0.0002 (0.754)		
FS				-0.0000 (-0.026)	
NonSOE×FS				-0.0001 (-0.340)	
FI					0.0002 (1.063)
NonSOE×FI					-0.0005** (-2.353)

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Size	-0.0045	-0.0107***	-0.0036	-0.0102**	-0.0095**
	(-1.086)	(-2.630)	(-0.913)	(-2.470)	(-2.342)
Lev	0.0174**	0.0196***	0.0237***	0.0193***	0.0183**
	(2.358)	(2.639)	(3.276)	(2.587)	(2.445)
MB	0.0003	0.0005*	0.0003	0.0005*	0.0004
	(1.051)	(1.811)	(1.124)	(1.764)	(1.592)
Top1	-0.0002*	-0.0002*	-0.0002*	-0.0002*	-0.0002*
	(-1.775)	(-1.947)	(-1.666)	(-1.944)	(-1.800)
ROA	0.0061***	0.0060***	0.0062***	0.0060***	0.0060***
	(19.421)	(18.891)	(19.997)	(18.884)	(18.961)
Constant	0.0166	0.0073	0.0316	0.0073	-0.0095
	(0.340)	(0.157)	(0.687)	(0.154)	(-0.205)
Obs	2205	2205	2205	2205	2205
R ²	18.13	16.65	20.96	16.65	16.91
F	18.44	16.73	21.87	16.73	17.02

Note: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

results support hypothesis 2; compared with state-owned listed firms, higher financial incentive levels for non-state-owned companies suggest a lower likelihood of upward earnings management.

V. Robust test

To verify the stability of the above conclusions, we divide the whole sample into a state-owned company group and a non-state-owned company group and conduct the sub-sample regression. As an example, the regression results of finan-

Table 7 Sub-sample regression test

	(1) ABSDA		(2) DA	
	State-owned companies	Non-state-owned companies	State-owned companies	Non-state-owned companies
FM	-0.0001	-0.0009***	-0.0008**	-0.0018***
	(-0.473)	(-3.303)	(-2.455)	(-5.354)
FSIZE	-0.0137***	-0.0251***	0.0007	-0.0076
	(-3.564)	(-4.695)	(0.130)	(-1.168)
LEV	0.0476***	0.1220***	-0.0071	0.0261***
	(4.211)	(17.240)	(-0.445)	(3.026)
MB	0.0004	-0.0003	0.0006	0.0001
	(0.833)	(-1.152)	(1.008)	(0.271)
TOP	0.0002*	0.0001	-0.0002	-0.0002
	(1.756)	(0.412)	(-1.409)	(-1.148)
ROA	0.0005	0.0050***	0.0026***	0.0073***
	(1.231)	(15.913)	(4.574)	(18.931)
_cons	0.1524***	0.2813***	0.0321	0.0531
	(3.933)	(5.042)	(0.591)	(0.781)
N	908	1297	908	1297
R ²	1.84	24.46	2.66	25.22
F	1.65	17.14	1.95	17.81

cial monitoring that are presented in table 7 indicate that for the degree of earnings management (ABSDA), the regression coefficient of non-state-owned companies' financial monitoring is -0.0009, which is at the 1% significance level, while that of state-owned companies is -0.0001, which is not significant. For the direction of earnings management (DA), the regression coefficient of non-state-owned companies' financial monitoring is -0.0018, which is at the 1% significance level while that of state-owned companies is -0.0008, which is at the 5% significance level. These observations suggest that for non-state-owned companies, the improvement of the financial monitoring level will lead to stronger deterrence of earnings management. The regression results of other control variables are also consistent.

VI. Conclusion

In this paper, we use the financial monitoring data from the Corporate Governance and Enterprise Development Research Center of Beijing Normal University to examine the impact of corporate governance related to financial monitoring on earnings management and further observe the influence of the nature of ownership on the relation between them. We find that effective financial monitoring can significantly inhibit earnings management and that the

internal mechanisms contribute differently: the mechanism of financial supervision and financial incentives can significantly lower the extent of earnings management, and the mechanism of financial control can significantly restrain earnings management that attempts to increase profits.

After considering the nature of ownership, we find the financial monitoring of state-owned companies is more effective than that of non-state-owned companies. However, the effects observed for the sub-indices vary within the groups. The level of financial rights allocation, financial control and financial supervision of state-owned companies is significantly higher than that of non-state-owned companies while the financial incentives level is significantly lower than for non-state-owned companies. For the non-state-owned companies, improvement of its financial control and financial incentives can increase the inhibition of earnings management.

This paper enriches the study on the economic consequences of corporate governance, and provides meaningful enlightenment for Chinese listed companies on how to better resolve the agency problem, restraint operator's earnings management and improve the quality of financial information.

Acknowledgement

Supported by the National Social Science Foundation of China (12AZD059), the Fundamental Research Funds for the Central Universities “Corporate Governance Factor Indicators Series of China”, the National 985 Program of China, and the Horizontal Subject (66400056).

Notes

- 1) Watts and Zimmerman (1986), Holthausen and Leftwich (1983) classify the accounting policy choices into three categories: opportunism behavior view, effective contract view and information view.
- 2) Industry classification is based on the “Classification Guidance of Chinese Listed Companies” issued by the CSRC in 1998. We group all listed companies following the CSRC industry classification standard. However, because most companies belong to the manufacturing industries, we use subcategories for the manufacturing industry, which results in a total of 21 industry categories.
- 3) There are two methods that can be used to calculate total accruals: the balance sheet method and the cash flow statement method. Collins and Hribar (2000) believe that sometimes it is better to use the cash flow statement method such as when there are mergers and acquisitions, non-recurring items, currency conversion etc., and using the balance sheet method to calculate total accruals may include the accruals generated from these special circumstance, which may overstate the discretionary accruals.

References:

- Amy P. Sweeney (1994), “Debt-covenant violations and managers’ accounting responses,” *Journal of Accounting and Economics*, Vol.17, No.3, pp.281-308.
- Cheng, Q. and T.D. Warfield (2005), “Equity incentives and earnings management,” *The Accounting Review*, Vol.80, No.2, pp.441-476.
- Collins, D.W. and P. Hribar (2000), “Earnings-based and accrual-based market anomalies: One effect or two?” *Journal of Accounting and Economics*, Vol.29, No.1, pp.101-123.
- Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1995), “Detecting earnings management,” *The Accounting Review*, Vol.70, No.2, pp. 193-225.
- Dechow, P.M. and Dichev, I.D. (2002), “The Quality of Accruals and Earnings: The Role of Accruals Estimation Errors,” *The Accounting Review*, Vol.77, No. s-1, pp.781-793.
- Dechow, P.M., Ge, W.L. and Schrand, C. (2010), “Understanding earnings quality: a review of the proxies, their determinants and their consequences,” *Journal of Accounting and Economics*, Vol.50, No.2-3, pp. 344-401.
- Defond, M and Jiambalvo (1994), “Debt Covenant Violation and Manipulation of Accruals,” *Journal of Accounting and Economics*, Vol.17, No.1-2, pp.145-176.
- Fan, J.P.H. and Wong, T.J. (2002), “Corporate Ownership Structure and Informativeness of Accounting Earnings in East Asia,” *Journal of Accounting and Economics*, Vol.33, No.3, pp.401-425.
- Gao Minghua (2011), *Report on Financial Governance Index of Chinese Listed Companies*, Economic Science Press (in Chinese).
- Gao Minghua (2013), *Report on Financial Governance Index of Chinese Listed*

- Companies*, Economic Science Press (in Chinese).
- Gu Mingrun (2012), "Information Asymmetry, Accounting Conservatism and Performance Predictability-The Signal Sending based on the Contract Incentive," *On Economic Problems*, Vol.4, pp.113-117 (in Chinese).
- Healy, P.M. (1985), "The Effect of Bonus Schemes on Accounting Decisions," *Journal of Accounting and Economics*, Vol.7, No.1-3, pp.85-107.
- Holthausen, R., Leftwich, R. (1983), "The economic consequences of accounting choice: implications of costly contracting and monitoring," *Journal of Accounting and Economics*, Vol.5, pp.77-117.
- Hribar, P. and C. Nichols (2007), "The Use of Unsigned Earnings Quality Measures in Tests of Earnings Management," *Journal of Accounting Research*, Vol.45, No.5, pp.1017-1053.
- Hunt, S. Moyer, T. Shevlin (1996), "Managing interacting accounting measures to meet multiple objectives: a study of LIFO firms," *Journal of Accounting and Economics*, Vol.21, No.3, pp. 339-374.
- Klein, A. (2002), "Audit committee, board of director characteristics, and earnings management," *Journal of Accounting and Economics*, Vol.33, No.3, pp.375-400.
- Kothari, S.P., Leone, A.J. and Wasley, C.E. (2005), "Performance matched discretionary accrual measures," *Journal of Accounting and Economics*, Vol.39, No.1, pp.163-197.
- Lei Guangyong and Liu Huilong (2006), "Between Big Shareholders' Control, Financing Scale and the Degree of Manipulating Surplus," *Management World*, Vol. 1, pp.129-136 (in Chinese).
- Lev and S.R. Thiagarajan (1993), "Fundamental information analysis," *Journal of Accounting Research*, Vol.31, No.2, pp.190-215.
- Li, H. and L. Zhou (2005), "Political Turnover and Economic Performance: The Incentive Role of Personnel Control in China," *Journal of Public Economics*, Vol.89, No.9-10, pp.1743-1762.
- Li Yue (2010), "Financial Governance Theoretical and Empirical Analysis," *Finance and Accounting for International Commerce*, Vol.4, pp.65-70 (in Chinese).
- Matsumoto, D.A. (2002), "Management's incentives to avoid negative earnings surprises," *The Accounting Review*, Vol.77, No.3, pp.483-514.
- Meng Yan and Zhang Xiumei (2006), "Research on the Relationship between Earning Management by Related Party Transactions and Listed Company's Profit being Transferred by Related parties," *Accounting Research*, Vol.4, pp.37-43 (in Chinese).
- Ming Jing and T.J. Wong (2003), "Earning Management and Tunneling Through Related Party Transactions: Evidence from Chinese Corporate Groups," EFA Annual Conference Paper.
- Qian, Y. (1994), "A Theory of Shortage in Socialist Economies Based on the Soft Budget Constraint," *American Economic Review*, Vol. 84, No.1, pp.145-156.
- R.G. Rajan and L. Zingales (1995), "What do we know about capital structure? Some evidence from international data," *The journal of Finance*, Vol.50, No.5, pp.1421-1460.
- Wang Huacheng and Tong Yan (2006), "Controlling shareholders and earnings quality-an empirical study based on earnings response coefficient," *Accounting Research*, Vol.2, pp.66-74 (in Chinese).
- Watts, R. L. and Zimmerman, J. L. (1986), *Positive accounting theory*, Englewood Cliffs, New Jersey Prentice Hall.

How does Corporate Governance Affect Earnings Management in China?

- Yao Xiaoming and He Cunhua (2003),
“Financial Governance Efficiency: stakeholder
information symmetry and balance the inter-
ests,” *Finance and Trade Economics*, Vol.4,
pp.56-58 (in Chinese).
(School of Economics and Business
Administration, Beijing Normal University)
- Yu Zhuoping (2011), “Corporate Governance
and Earnings Management Research,”
Communication of Finance and Accounting,
Vol.6, pp.85-87 (in Chinese).
(School of Economics and Business
Administration, Beijing Normal University)
- Zhang Weidong (2010), “Private placement of
new shares and Earnings Management-
Empirical Evidence from Chinese Stock
Market,” *Management World*, Vol.1, pp.54-63
(in Chinese).
(Graduate School of Economics, Nagoya
University)