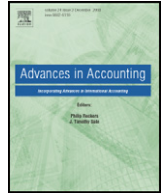




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Corporate governance, earnings management, and IFRS: Empirical evidence from Chinese domestically listed companies

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ABSTRACT

This research used 1,329 Chinese publicly listed companies' data from 1998 to 2009 to investigate how IFRS, state ownership, and board of directors (BOD) influence earnings management. We conclude that state-ownership to an extent discourages earnings management in the current environment of China. However, IFRS implementation does not seem to deter earnings management. When state-ownership is not the case, increasing the number of independent BOD seems to be a good practice to discourage earnings management, although non-independent BOD does not make any difference.

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1. Introduction

According to the IASB, over 100 countries have adopted the international accounting standards officially known as International Financial Reporting Standards or IFRS.² The United States is scheduled to decide sometime in 2011 about whether to incorporate IFRS into the financial reporting system for U.S. issuers³ With the possibility of global adoption of IFRS imminent, this seems an opportune time to investigate the effects of IFRS on various issues. Several researchers have approached this topic from several different angles, e.g., IFRS's impact on earnings management; the relationship between IFRS and information asymmetry (Leuz, 2003); how IFRS affects the cost of equity capital (Daske, 2006; Lambert, Leuz, & Verrecchia, 2007); whether IFRS improves market liquidity (Daske, Hail, Leuz, & Verdi, 2008); and how IFRS affects Tobin's *q*, which measures effects beyond the cost of capital and market liquidity (Daske et al., 2008).

This paper investigates the effect of state ownership, IFRS, and independent boards of directors on earnings management in the context of Chinese publicly listed companies. The investment market of China has undergone some major changes over the years, including the establishment of an independent board of directors system in 2001 and the conversion to IFRS in 2007. China mandated IFRS

conversion for publicly traded companies starting 1/1/2007.⁴ China's approach is a principles-based approach to translate the new rules into its own code, the Chinese Accounting Standards System. The revisions bring Chinese standards closer to the IFRS benchmark of internationally recognized quality, but the new standards will not be word-for-word translations of IFRS, though they will be founded on similar principles. A few differences are highlighted below:

- The application of fair value will be tailored for a country where the government retains significant influence and free markets have not fully developed.
- Related party disclosure requirements will be modified to reflect the context of state-ownership. State enterprises will be exempt from the "related-party" disclosure provisions because of the dominance of government enterprises.
- There will be no ability to reverse impairment charges.

In 2001, the China Securities Regulatory Commission issued, "Directory about establishing an independent board of directors system in listed Companies". According to the directory, by 6/30/2003, at least one-third of the members of the board of directors should be independent. The intension is that the independent board of directors system will become a formal mechanism to monitor the behavior of and improve the corporate governance of Chinese domestically listed companies.

How have the above changes influenced the investment market of China? We look at it from the perspective of earnings management. Can an independent board of directors improve corporate governance, and thus reduce earnings management? *Bebchuk and Hamdani (2009)* pointed out that good corporate governance practices at a publicly held firm will not necessarily be good practices at a publicly traded firm in

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² IASB. 2009. Who we are and what we do. International Accounting Standards Board, IASC Foundation, July 13. Available at: <http://www.iasb.org/About+Us/International+Accounting+Standards+Board+-+About+Us.htm>.

³ SEC. 2010. Speech by SEC Commissioner: Remarks at the 14th Annual SEC Regulation Outside the United States Conference. US Securities and Exchange Commission, June 10.

⁴ Taub, Stephen. 2/16/2006. Today in Finance: China to adopt IFRS.

which there is a controlling shareholder. This is because board independence, a key concept in structuring appropriate corporate governance practices, has a different meaning when a controlling shareholder is present. The research by [Bebchuk and Hamdani \(2009\)](#) inspired us to investigate the relationship between independent boards of directors and state ownership of Chinese domestically listed companies. The significant change of accounting system starting 2007 also demands this research to evaluate IFRS effect on the interaction of independent board of directors, earnings management, and state ownership.

2. Literature review

Corporate governance has been a topic of research for decades. We herein review a few of recent studies regarding corporate governance.

[Li and Samsell \(2009\)](#) suggest that economies vary in terms of their emphasis on formal rules versus informal relationships. In Anglo-American economies, the primary governance mechanism is the equity market ([Saberwal & Smith, 2008](#)). In China, the primary governance mechanism is the state and informal networks ([Shen & Chen, 2009](#)). [Judge \(2010\)](#) gives a complete review of corporate governance around the world.

[Li \(2010\)](#) examined tunneling by controlling shareholders in Chinese public companies. Tunneling is the transfer of assets out of public companies for the benefit of controlling shareholders. [Li \(2010\)](#) concluded that tunneling is severe and that private controlling ownership significantly increases the severity of it. [Li's \(2010\)](#) research seems to support the conclusion by [Shen and Chen \(2009\)](#) that the primary governance mechanism in China is the state and informal networks. Recent study about ownership and corporate governance also includes [Sueyoshi, Goto, and Omi \(2010\)](#) research about Japanese firms. Their conclusion is that stable shareholding is an important aspect of traditional Japanese corporate governance, although stable shareholding enhances operational performance only when the ratio of shares held by stable shareholders is more than 61.21%.

However, [Leuz, Nanda, and Wysocki \(2003\)](#) finds that earnings management appears to be lower in economies with large stock markets, dispersed ownership, strong investor rights, and strong legal enforcement. This conclusion conflicts with research by [Li \(2010\)](#), [Shen and Chen \(2009\)](#), and [Sueyoshi, Goto, and Omi \(2010\)](#). These studies found that large/state shareholding was an important governance mechanism. [Leuz et al. \(2003\)](#) conclusions are based on data from 31 countries from 1990 to 1999. The countries include Asian countries such as Japan, Philippines, Indonesia, Korea, as well as the United States, United Kingdom, Belgium, etc. The dataset did not include China.

This paper investigates the effect on Chinese publicly traded companies of state ownership on corporate governance and earnings management.

Extensive research has been done on the impact of outside directors as well. [Musteen, Datta, and Kemmerer \(2010\)](#) found that firms with a greater proportion of outside directors and those with larger boards exhibited better reputations than those with smaller boards and a higher proportion of insiders. The study sample involved companies included in the 2000 Fortune List of America's Most Admired Corporations. (This list has been compiled annually since 1983.) [Duchin, Matsusaka, and Ozbas \(2010\)](#) conclude that the effectiveness of outside directors depends on the cost of acquiring information about the firm. When the cost of information acquisition is low, performance increases when outsiders are added to the board. When the information acquisition cost is high, performance worsens when outsiders are added to the board. The data are from American firms over the period 2000–2005.

[Shen and Chih \(2007\)](#) examined the impacts of corporate governance on earnings management. They conclude that firms with good corporate governance tend to conduct less earnings management and large size firms are prone to conduct earnings smoothing. The paper used CLSA (Credit Lyonnais Securities Asia) corporate governance measures. CLSA calculated an index with corporate governance rankings for 495 firms across 25 emerging markets and 18 sectors. The paper examined the relationship between [Leuz et al.'s \(2003\)](#) earnings management proxies and corporate governance.

3. Methodology

3.1. Data collection

We recruited students fluent in Chinese to manually collect data from sina.com.cn. Data were collected from a total of 1329 publicly listed companies, and 11,947 company years. We included all industries in our data collection. We then grouped our observations into China GAAP observations from 1998–2006 (8059 observations in total) and IFRS observations from 2007 to 2009 (3888 observations in total).

3.2. Earnings management

Earnings management has been the subject of extensive accounting research. [Healy and Wahlen \(1999\)](#) defined earnings management as the alteration of a firm's financial reports by insiders in order either to mislead some stakeholders or to influence contractual outcomes that are dependent on numbers in the financial reports. [Leuz et al. \(2003\)](#) adopted this definition as do we.

Measuring the degree of earnings management has presented challenges, and researchers have devised various methods. In this study, we will use the methods developed by [Leuz et al. \(2003\)](#), which were based on previous work by [Dechow, Sloan, and Sweeney \(1995\)](#), [Healy and Wahlen \(1999\)](#) and [Dechow and Skinner \(2000\)](#).

Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. This often takes the form of income smoothing or income manipulation.

We use the method defined by [Leuz et al.'s \(2003\)](#) to quantify earnings management. We first introduce accruals and cash flow.

The operational definition of accruals is:

$$\text{Accruals} = (\Delta\text{CA} - \Delta\text{Cash}) - (\Delta\text{CL} - \Delta\text{STD} - \Delta\text{TP}) - \text{Dep} \quad (1)$$

where:

ΔCA	change in total current asset;
ΔCash	change in cash/cash equivalents;
ΔCL	change in total current liabilities;
ΔSTD	change in short-term debt included in current liabilities;
ΔTP	change in income taxes payable;
Dep	depreciation and amortization expense.

We then calculate cash flow from operations:

$$\text{Cash flow from operations} = \text{Operating earnings} - \text{Accruals} \quad (2)$$

$$\text{EM} = |\text{Accruals}| / |\text{Cash flow from operations}| \quad (3)$$

where: EM stands for earnings management.

The larger EM is indicative of large-scale use of discretion to manipulate reported accounting earnings. ([Leuz et al. \(2003\)](#) identifies other measures of earnings management. However, these other measures are not applicable for purposes of this paper.)

Table 1
Data Statistics.

Variable	EM	Size*	Leverage	Firm Age*	Board of Directors	
					Non-Independent*	Independent*
<i>Group 1: State Ownership <20%</i>						
Mean	19.30	20.00	1.02	181.11	0.36	0.17
Std Dev	1306.01	2.10	15.41	52.24	0.16	0.09
<i>Group 2: State Ownership ≥20%</i>						
Mean	2.43	20.31	1.49	172.02	0.37	0.10
Std Dev	14.32	1.30	24.72	45.62	0.22	0.09

*The two groups are significantly different at $p < 0.01$.

3.3. Earnings management, state ownership, IFRS, and independent board of directors

Once we quantify earnings management for each firm year using formula three, we use it as the dependent variable. We use regression analysis to analyze the relationship between earnings management and factors of interest.

We first divide the data into two groups according to state-ownership percentage. The first group includes company years with state ownership percentage less than 20%. The second group includes company years with state ownership percentage equal to or greater than 20%. Our definition of state ownership includes both direct and indirect (through state-owned companies) ownership. We chose the 20% ownership level because it is used elsewhere in accounting (specifically in determining whether to adopt the equity method) to determine the amount of ownership that is too small to exert significant influence on the entity.

We then separately run regression analyses for both groups. For both analyses, our independent variables include size (use natural log of sales as proxy), leverage (total liability/total assets), firm age, IFRS dummy variable (for 2007–2009 firm years, IFRS = 1, otherwise, IFRS = 0), number of non-independent board of directors (scaled by size), number of independent board of directors (scaled by size).

4. Results

Table 1 shows data statistics for earnings management, size, leverage, firm age, number of non-independent BODs (scaled by size), number of independent BODs (scaled by size). The data is divided into two groups: Group 1 shows observations with state ownership of less than 20%. Group 2 shows observations with state ownership of at least 20%.

Although the mean earnings management measure for group 1 (state ownership <20%) is much bigger than group 2 (state ownership ≥20%), which are 19.3 and 2.43 respectively, the t -test did not find significant difference of the measure. The variances of the measure are significantly different at $p < 0.0001$. To look at the mean

of this measure together with the standard deviation of this measure, and also take into consideration that the variances of this measure is significantly different for the two groups, we conclude that earnings management measure varies greatly for observations with state ownership of less than 20% while there tends to be less variability for observations with at least 20% state ownership.

The means of size, firm age, number of non-independent BOD (scaled by size), and number of independent BOD (scaled by size) are significantly different for the two groups at $p < 0.0001$. The most noticeable is the number of independent BOD (scaled by size). Observations with less than 20% state ownership have significantly more independent BOD compared with observations with at least 20% state ownership.

Because earnings management measure varies greatly from 0.0007 to 105,098, meaningful conclusion cannot be made by running regression based on the original number. The results will be too distorted by outliers. We decided to rank earnings management measures and use the rank as the dependent variable to investigate earnings management's relationships with other measures.

Table 2 shows regression results with the earnings management rank as the dependent variable.

We ran the model separately for the two groups, the state ownership smaller than 20% and the state ownership at least 20%. The overall results of the model for both groups are significant at $p < 0.0001$. For both groups: The bigger the size of the company, the smaller the earnings management will be at $p < 0.0001$; the older the company, the bigger the earnings management at $p < 0.01$. The leverage did not play a role for the state ownership less than 20% group, however, it significantly increased earnings management at $p < 0.01$ for the state ownership more than 20% group. Independent BOD significantly decreased earnings management for the state ownership less than 20% group at $p < 0.01$ while it did not influence earnings management when state ownership is equal or bigger than 20%. Non-independent BOD did not significantly influence earnings management for both groups.

We do not find IFRS implementation plays a role in explaining earnings management.

We further analyze the mean of the rank of earnings management. The result is reported in Table 3.

The means of the two groups are significantly different at $p < 0.0001$ with group 1 (state ownership <20%) and group 2 (state ownership ≥20%) at 5418 and 5133, respectively. So, the earnings management level is significantly higher for observations with less than 20% state ownership compared with observations with higher state ownership.

5. Robust test

To take into consideration that the effects of Chinese IFRS on earnings management occur prior to the official adoption date, we reclassified the data from year 2006 as post IFRS observations

Table 2
Regression Results.

Dependent Variable: Rank of EM = Accrual / CashFlowFromOperation							
Variable	Group 1: State Ownership <20%			Group 2: State Ownership ≥20%			
Independent Variable	Estimate	t-Value	Pr > t	Estimate	t-Value	Pr > t	Pr > t
Intercept	7,615.01	16.39	<0.0001	11,924.00	13.99	<0.0001	<0.0001
Size	-137.87	-7.14	<0.0001	-378.40	-9.62	<0.0001	<0.0001
Leverage	-2.90	-0.87	0.3859	153.50	3.20	0.0014	0.0014
FirmAge	4.00	5.26	<0.0001	4.48	3.70	0.0002	0.0002
IFRS Dummy	33.78	0.40	0.6922	-84.17	-0.19	0.8483	0.8483
Non-IndependentBOD	287.87	1.01	0.3146	40.80	0.16	0.8699	0.8699
IndependentBOD	-1,548.25	-2.80	0.0051	491.83	0.77	0.4410	0.4410
	Overall Model: $p < 0.0001$			Overall Model: $p < 0.0001$			
	Adjusted $R^2 = 0.0146$			Adjusted $R^2 = 0.0361$			

Table 3
Data Statistics.

	Rank*
<i>Group 1: State Ownership <20%</i>	
Mean	5418
Standard Deviation	3070
<i>Group 2: State Ownership ≥20%</i>	
Mean	5133
Standard Deviation	3046

*The two groups are significantly different at $p < 0.0001$.

together with 2007–2009 data and reran the test. The results are consistent with our previous results.

6. Conclusion

We do not find evidence that IFRS implementation deters earnings management, after taking into consideration state ownership levels.

Significant state ownership significantly decreases earnings management. For companies without significant state ownership, independent BOD significantly decreases earnings management, while non-independent BOD does not. When significant state ownership exists, BOD does not make a difference on earnings management.

Size is a deterring factor of earnings management. Earnings management goes down with size. Age is an encouraging factor of earnings management. Earnings management goes up with age.

To sum up, in the current environment of China, state-ownership to an extent discourages earnings management. This finding is consistent with Li (2010), Shen and Chen (2009) and Sueyoshi, Goto, and Omi (2010). However, IFRS implementation does not seem to deter earnings management. When state-ownership is not the case, increasing the number of independent BOD seems to be a good practice to discourage earnings management. Thus, the rules requiring at least 1/3 of the members of the BOD to be outside directors seem to be effective for private companies.

References

- Bebchuk, Lucian A., & Hamdani, Assaf (2009). The Elusive Quest for Global Governance Standards. *University of Pennsylvania Law Review*, 157, 1263–1317.
- Daske, Holger (2006). Economic Benefits of adopting IFRS or US-GAAP-Have the expected cost of equity capital really decreased? *Journal of Business Finance and Accounting*, 33(3 and 4), 329–373.
- Daske, Holger, Hail, Luzi, Leuz, Christian, & Verdi, Rodrigo (2008). Mandatory IFRS reporting around the world: Early Evidence on the Economic Consequences. *Journal of Accounting Research*, 46(5), 1085–1142.
- Dechow, P., & Skinner, D. (2000). Earnings management: reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons*, 14, 235–250.
- Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review*, 70, 193–225.
- Duchin, Ran, Matsusaka, John G., & Ozbas, Oguzhan (2010). When are outside directors effective? *Journal of Financial Economics*, 96, 195–214.
- Healy, P., & Wahlen, J. (1999). A review of earnings management literature and its implications for standard setting. *Accounting Horizons*, 13, 365–383.
- Judge, William (2010). Corporate Governance Mechanisms throughout the world. *Corporate Governance: An International Review*, 18(3), 159–160.
- Lambert, Richard, Leuz, Christian, & Verrecchia, Robert E. (2007). Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research*, 45(2), 385–419.
- Leuz, Christian (2003). IAS Versus U.S. GAAP: Information asymmetry-based evidence from Germany's new market. *Journal of Accounting Research*, 41(3), 445–472.
- Leuz, Christian, Nanda, Dhananjay, & Wysocki, Peter D. (2003). Earnings management and investor protection: an international comparison. *Journal of Financial Economics*, 69, 505–527.
- Li, Guoping (2010). The pervasiveness and severity of tunneling by controlling shareholders in China. *China Economic Review*, 21, 310–323.
- Li, S., & Samsell, D. (2009). Why some countries trade more than others: The effect of governance environment on trade flows. *Corporate Governance: An International Review*, 17, 47–61.
- Musteen, Martina, Datta, Deepak K., & Kemmerer, Benedict (2010). Corporate reputation: Do board characteristics matter? *British Journal of Management*, 21, 498–510.
- Saberwal, S., & Smith, S. (2008). Concentrated shareholders as substitutes for outside analysts. *Corporate Governance: An International Review*, 16, 562–577.
- Shen, W., & Chen, Lin (2009). Firm profitability, state ownership, and top management turnover at the listed firms in China: A behavioral perspective. *Corporate Governance: An International Review*, 17, 443–456.
- Shen, Chung-Hua, & Chih, Hsiang-Lin (2007). Earnings management and corporate governance in Asia's emerging markets. *Journal Compilation*, 15(5), 999–1021.
- Sueyoshi, Toshiyuki, Goto, Mika, & Omi, Yusuke (2010). Corporate governance and firm performance: Evidence from Japanese manufacturing industries after the lost decade. *European Journal of Operational Research*, 203, 724–736.