



Earnings management in China: an exploratory study

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in China

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Abstract

Purpose – In recent years, China has been making progress in internationalizing its financial reporting system. However, it is believed that earnings management from legitimate accounting choices to fraud that violates generally accepted accounting principles, is common in the mainland. The purpose of this study is to identify the most frequently used earnings management techniques in China and the underlying factors that motivate firms to engage in earnings management.

Design/methodology/approach – Data were gained through a questionnaire sent to managers and accountants in mainland Chinese companies.

Findings – The results show that the size and form of ownership of companies materially influence earnings management incentives and techniques in China. Public ownership companies have stronger incentives to manage earnings for management compensation, while private ownership companies pay more attention to tax expense savings. Also, several popular techniques employed in China are revealed.

Originality/value – This study presents a general picture of earnings management in China by surveying the opinions of accountants and financial managers in Chinese companies.

Keywords Earnings, China, Financial reporting, Accounting

Paper type Research paper

Introduction

It is well known that the economy of China has been developing at an astonishing pace and China's role as a global economic powerhouse is undeniable. Coupling with this rapid economic growth, a sound framework of corporate governance has become a top priority in the Chinese government's agenda. Recently, a number of efforts could be seen driving China's business environment toward higher level of transparency and accountability. For example, conversion of non-tradable shares into freely tradable shares, promulgation of new accounting standards converging with International Financial Reporting Standards (IFRS), mandate quarterly reporting and the many reforms in related legal areas. Nevertheless, China's capital market is still emerging and the building up of a well-defined corporate governance framework can only proceed gradually. As such, while many Chinese businesses are becoming very influential multinational corporations, there is still a perception of private entrepreneurs operating in China under inefficient checks and balances and lack transparent financial reporting (CFA Institute, 2007).

Take the area of accounting standards reform for instance. Beginning February 2006, all listed companies in China have to report their financial statements using the new Accounting Standards for Business Enterprises (ASBE). This helps to improve



the quality of the financial information reported and has an important impact on boosting investor confidence (CFA Institute, 2007). A recent study by Ip and Noronha (2007) also indicated that harmonization progress of the Chinese accounting standards is heading toward the right direction. However, given the nascent development into a capital market and the enormous vastness of China as an economic system, the road toward properly regulated financial reporting is still long and winding, especially for non-listed companies. As commented by an International Finance Corporation (the private sector arm of the World Bank Group) staff member, most small and mid-sized enterprises in China are run informally. They are family-owned, they do not have checks and balances and their financial reporting is not transparent (International Finance Corporation, 2005). Therefore, it can be seen that the regulatory system is still very crude, with many aspects of accounting practices not clearly regulated. Wu (2004) pointed out that the deficiencies of accounting standards have seriously influenced the quality of accounting information in the Chinese market. This leads us to believe that earnings management is common in the mainland. In 1999, according to a survey to financial managers of listed companies in China, more than 40 per cent of the respondents thought that managing earnings was useful for their companies (*Security Times*, 1999). In recent years, a number of notorious earnings management cases have been exposed. For example, Yin GuangXia, a famous high-tech chemical firm highly appraised by many investors, had engaged in more than RMB0.7 billion of fraudulent net profits in 2001. In the popular press, the Yin GuangXia case had often been compared with the Enron case in the USA.

Dechow and Skinner (2000) have pointed out that accounting academics often have very different perceptions of earnings management than do practitioners and regulators. Practitioners and regulators often see earnings management as pervasive and problematic and in need of immediate remedial actions, while academics are more unwilling to believe that earnings management is actively practised by firms. Dechow and Skinner (2000) observe that academics usually make general statements about earnings management and often choose to examine large samples of firms, and so tend to use statistical definitions that may not be very powerful in identifying earnings management. Dechow and Skinner (2000) has also mentioned that, in contrast, practitioners and regulators observe actual cases of earnings management on a regular basis because their objectives are different from those of academic research. Also, academics usually focus on particular ex-post samples and management incentives that are not of great interest to practitioners. As a result, many studies on earnings management do not pay much attention to the opinions of practitioners and regulators and have limited practicability.

Taking a practitioners' viewpoint, the first step is to understand why companies engage in earnings management, or what their specific reasons to manage earnings are. This involves asking a number of practical research questions. For example, according to existing literature, researchers have tested and summarized four main kinds of incentives for earnings management namely, debt covenant, capital market pressure, tax considerations and management compensation, but which incentive is more important than the others? Dechow and Skinner (2000) have pointed out that capital market pressures such as meeting analysts' expectations is more important than contractual arrangements, but is this also true for Chinese companies? Also, different market and institutional factors will influence the ranking of incentives.

Baralexis (2004) found that small companies are more concerned about tax expenses, while some Chinese researchers (Ren, 2004) argue that state-owned companies have low incentives to meet the expectations. Ortega and Grant (2003) classify most of the earnings management techniques into four categories namely, revenue recognition, operating expense timing, unrealistic assumptions to estimate liabilities, and real operating actions. Also, researchers such as Mulford and Comiskey (2002) and Schilit (2002) have listed many earnings management techniques. The question is which incentives are more important for Chinese companies? Will factors, such as size and ownership of the company, affect their importance? Will the incentives influence the choice of techniques used for earnings management? In this paper, we aim to answer these questions.

Defining earnings management

Due to the lack of an agreed definition of earnings management, researchers often develop their own definitions of earnings management suitable for their purposes. For example, Davidson *et al.* (1987 cited in Schipper, 1989, p. 92) defined earnings management as “the process of taking deliberate steps within the constraints of generally accepted accounting principles to bring about a desired level of reported earnings”. While Schipper (1989, p. 92) defined it as “a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to say, merely facilitating the neutral operation of the process)”. On the other hand, Healy and Wahlen (1999, p. 368) pointed out that “earnings management occurs when managers use judgment in financial reporting in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers”. In order to approach a definition of earnings management suitable for the present study, we believe that it is necessary to raise three main questions as stated below:

- (1) Is earnings management only in the context of financial reporting, or does it also contain operational or real activities?
- (2) To what extent is earnings management an acceptable practice if at all?
- (3) By managing earnings, do managers actually intend to mislead investors (opportunistic perspective) or to legitimately exercise accounting discretions (information perspective)?

Some academics (Dechow and Skinner, 2000) have pointed out that the main focus of earnings management is not only on the GAAP-based earnings management activities referring to the timing and recognition of revenues and expenses. Earnings management should also include operational or real activities which deal with voluntary business decisions like slashing prices when sales are lagging (Schipper, 1989), or timing real business decisions such as delaying or accelerating discretionary expenditures. Sometimes these activities have been labeled “good” earnings management which Parfet (2000, p. 485) called “reasonable and proper practices that are part of operating a well-managed business and delivering value to shareholders.” But one problem with this operational earnings management is the difficulty to judge whether a business decision is for making profit or managing earnings. Also, operational earnings management is difficult to detect by examining the financial statements because they are real transactions.

For the purpose of this study, we view earnings management mainly as financial reporting activities unless there are some significant operational earnings management issues like special arrangements for related party transactions which can be easily identified. After constraining earnings management in the context of financial reporting, we should further consider what kind of reporting behavior is earnings management; should it be fraudulent or only an intervention within the constraints of GAAP?

Unlike earnings management, the National Association of Certified Fraud Examiners' definition of financial fraud is well-accepted by academics and professionals as: "The intentional, deliberate, misstatement or omission of material facts, or accounting data, which is misleading and, when considered with all the information made available, would cause the reader to change or alter his or her judgment or decision." From this definition, we can see that financial fraud, which is also a form of deliberate intervention of the financial reporting and accrual accounting process, can be viewed as an extreme form of earnings management. In addition, a report of the Panel on Audit Effectiveness considers earnings management to include a "wide variety of legitimate and illegitimate actions by management that affect a company's earnings" (POB, 2000, p. 77). The report regards earnings management on a continuum from legitimate adjustments in the ordinary course of business to fraudulent financial reporting. Since this study attempts to investigate earnings management from the viewpoint of practitioners, it is consistent for us to follow the concept held by regulators and professionals. Thus, we define earnings management as a set of accounting choices from within GAAP to violating GAAP.

Finally, we need to set our perspective on earnings management. The opportunistic perspective holds that managers intend to mislead investors. On the other hand, the information perspective holds that managerial discretion is a means for managers to reveal to investors their private expectations about the firm's future cash flow (Holthausen and Leftwich, 1983). Researchers have predicated their conclusions on an opportunistic perspective and have not validated the information perspective (Beneish *et al.*, 2000). Furthermore, if we adopt the information perspective, then we would not be able to distinguish earnings management from regular managerial discretions, because all managerial decisions are based on the expectations of managers. The information perspective is difficult to directly operate by utilizing attributes of reported accounting numbers, since we cannot identify the managerial intention from the financial statements. This limitation in measurement is one of the reasons why academic research reports little evidence for the existence of earnings management (Dechow and Skinner, 2000).

After clarifying the three questions, we can now provide our own definition of earnings management which will be the foundation of our research design:

In this study, we view earnings management as a continuum of purposeful interventions in the external financial reporting process, from legitimate activities to fraud violating GAAP, with the intention of misleading some stakeholders about the underlying economics and performance of the company.

Incentives for managing earnings

As stated by Healy and Wahlen (1999), managers mainly manipulate earnings for four kinds of incentives namely, external contract incentives, management compensation contract incentives, regulatory motivations and capital market motivations.

External contract incentives

External contracts, for instance debt contracts, dividend covenants and supplying contracts, can drive managers to manipulate accounting data to meet the contract requirements. Debt contracts are written to limit managers' actions that benefit the firm's stockholders at the expense of its creditors (Watts and Zimmerman, 1986). A number of studies have examined whether firms that are close to lending covenants manage earnings. For example, Defond and Jiambalvo (1994) found that sample firms accelerate earnings in the year prior to the covenant violation. Sweeney (1994) also found that covenant violators make income-increasing accounting changes.

Management compensation contract incentives

Most management compensation contracts measure the achievement of managers by accounting data such as profit and sales scale. Watts and Zimmerman (1986) stated that managers have incentives to advance the reported earnings from the future to the current accounting period when a bonus award plan existed. This can be corroborated by a number of studies which have consistently pointed out that managers use accounting judgment to increase earnings-based bonus awards (Guidry *et al.*, 1999; Healy, 1985; Holthansen *et al.*, 1995; Deangelo, 1986; Dechow and Sloan, 1991).

Regulatory motivations

The earnings management literature usually suggest that regulatory considerations rather than anti-trust considerations induce firms to manage earnings, due to extremely strict and vigorous taxation laws (Moyer, 1990; Scholes *et al.*, 1990; Beatty *et al.*, 1995; Collins *et al.*, 1995; Cahan, 1992; Jones, 1991; Key, 1997). However, this may not be the case for small and medium sized companies. Baralexis (2004) found that small companies are actually concerned more about tax expense savings in their earnings management considerations. This result indicates that earnings management for tax-planning purpose may also be prevalent in practice. In China, anti-trust regulations and industry-specific regulations for earnings are rare and we argue that the most important regulatory motivation for Chinese companies is tax considerations.

Capital market motivations

Capital market motivations such as manipulating earnings to influence short-term stock prices has been recognized as the most important reason for managers to manipulate earnings (Dechow and Skinner, 2000). This has been supported by a number of studies, such as Teoh *et al.* (1998a, b) which found that managers actually overstate earnings during periods prior to equity offers by, for example, reporting income, increasing unexpected accruals prior to initial public offerings (IPO) and most importantly, reversing such unexpected accruals following the IPOs (Teoh *et al.*, 1998). However, for Chinese companies, the most important capital market pressure may come from the regulatory framework. The China Securities Regulatory Commission (CSRC) has issued a series of guidelines to restrict rights issues. These standards all require a minimum level of profit or return on equity (ROE). Jiang and Wei (2001) showed that the percentage of firms reporting an ROE of just above 10 per cent from 1994 to 1997 (the minimum ROE requirement for rights issues in these years) had been increasing. Chen *et al.* (2000) also provided evidence that firms whose ROEs were slightly above 10 per cent had unusual increases in accounts receivable (as a percentage of sales).

Factors influencing incentive preferences

In summary, the four incentives can be regarded as the main reasons for managers to exercise earnings management. However, the problem that we are interested in, and which may also be more important to the regulators, is how managers consider the importance of the incentives. Given different environmental variables, managers will have different preferences on the incentives. Based on the understanding of the particular standard setting and market situation, we consider two factors as key features in this study.

The first factor is company size. As stated by Baralexis (2004), in Greece small companies have different incentives than do big ones. Tax considerations are very important for small and even medium-sized companies, while capital market motivation is the prime consideration for most listed companies. Zhu and Su (2002) found that small and medium-sized companies in China have incentives to manage earnings for management compensation and tax expense savings. According to official data, there were 11.63 million companies in China as of June 2003, of which 11.58 million were small or medium-sized companies (National Statistics Bureau, 2005). Large companies and foreign invested companies are charged at a preferential income tax rate as low as 15 per cent, or may even get a tax exemption. However, small and medium sized companies pay the normal rate of income tax at 33 per cent. Since most of the companies are competing in the same domestic market, we hypothesize that small and medium-sized companies would aim to manage earnings so as to lower tax expenses to gain a favorable competitive position. Furthermore, Chinese banks control very tightly the loans to small and medium-sized companies. Therefore, small companies may have strong incentives to window-dress their financial reports for access to loan funds. Due to the fact that manipulation is rather simple and easy and given the variable quality of accountants in China, small and medium-sized companies can simply employ some direct and illegal ways to realize their targets. So we believe that company size will influence incentives and specific accruals used for earnings management in China.

The other factor is the ownership structure of the company. Ownership in China is usually a very critical factor for managerial behaviors and this has been supported by the findings of a number of studies. For example, Wang (2005) stated that ownership structure has important effects on the informative value of reported earnings. Hao (1999) pointed out that the non-tradable characteristic of state-owned enterprise shares is the basic reason for the low quality of earnings data. Ren (2004) has observed that state-owned companies have little incentives to meet debt covenants because Chinese banks, which are also owned by the government, will lend money to state-owned companies with no material risk control. However, for the private sector, the situation is totally reversed. Banks control the loans to private companies very strictly and, therefore, this leads to the motivation to manage earnings so as to borrow funds. Furthermore, since most of the leaders in state-owned companies are also government officials, corporate earnings attainment is one of their promotion criteria. Thus, they may have the incentive to window-dress the earnings data. On the other hand, the CEOs of small and medium-sized private companies are also the owners and, therefore, they may have little interest in managing earnings for compensation purposes. Hence, in China, ownership arrangements can influence the incentives of earnings management significantly and will also influence the specific accruals chosen for managing earnings.

Earnings management techniques used in China

Ortega and Grant (2003) classify most of the earnings management techniques employed by American managers into four categories namely:

- (1) revenue recognition (such as recognizing revenues prematurely to boost earnings);
- (2) operating expense timing (such as shifting expenses from one period to another;
- (3) unrealistic assumptions to estimate liabilities (such as using aggressive assumptions when accruing liabilities); and
- (4) real or operating actions (making voluntary business decisions in the ordinary course of running a business).

These techniques may similarly be employed by Chinese companies and in fact we can identify some rather common earnings management techniques frequently used in China.

Postponing or advancing the time of recognizing operational or sales revenue is common. However, other revenues, such as rental fees from unused factories or revenue from sale of property, can provide earnings management opportunities for companies since they are not regular and not easy to trace. For example, in 1997, Guanghua Holdings, a listed real estate company in the Jilin province lost RMB42.92 million on its main business but gained RMB51.98 million to cover this by a sale of land.

The various expense accounts also provide tremendous opportunities for earnings management. Chinese companies rely on several expense accounts to manipulate reported earnings. Interest expenses for construction in process (CIP) can be capitalized so that the timing of transferring CIP to fixed assets can change the interest expense for the current year. Also, buildings in construction are not depreciated so that many companies use buildings without closing the CIP account to take the advantage of lower depreciation expenses. Depreciation expenses can also be manipulated by changing the depreciation methods. Chinese GAAP allows companies to change depreciation methods to reflect the real economic situation, while the tax law disallows such changes. Therefore, some companies change depreciation methods to manipulate the reported earnings whereas they maintain the same level of tax expense and cash flow. Administrative expense is another very important account for managers to focus on. There are many subsidiary ledgers below the administrative expense and many of them are regulated rigidly by taxation law. For example, entertainment expense cannot exceed 0.5 per cent of sales for a firm with sales volume below RMB15 million, and for a firm with a sales volume over RMB15 million, the exceeding part can only expend 0.3 per cent for entertainment (Chung, 2005, p. 17). Therefore, many small companies have incentives to reclassify expenses in these ledgers to lower their tax expense. The same case can also extend to selling expenses, such as promotional expenses (0.5 per cent of sales and non-cumulative) and advertising expenses (2 per cent of sales and cumulative) (Chung, 2005, p. 18). A gain or loss from disposal is another account which can be used for earnings management. Companies can extend the period of disposal to time the allocation of disposal gains or losses.

Although operational earnings management is not a major area in our study, two kinds of real operations namely, receiving revenue from government subsidies (Chinese local governments usually give subsidies to some important companies to

improve their performance so as to meet some capital market requirements) and related party transactions to transfer revenues or losses between different entities, are particularly important in China so they cannot be ignored.

After searching the literature and seeking some general comments from several professional accountants in China, we present here a list of 11 techniques or accruals which may be used by Chinese companies:

- (1) Adjusting accounts receivables or bad debt allowance (e.g. increase or decrease allowance expense).
- (2) Gains or losses from disposals (e.g. extend or shorten the disposal period).
- (3) Construction in progress (e.g. postponing or advancing the time of completion).
- (4) Changing the depreciation method (e.g. straight-line to declining-balance).
- (5) Adjust other revenues and gains (e.g. rental, sale of property).
- (6) Adjusting investment operations (e.g. expense method to equity method).
- (7) Related party transactions (e.g. purchase and sales, transference).
- (8) Operating revenue (e.g. buy back, postponing or advancing the time of recognition).
- (9) Revenue from government subsidies.
- (10) Adjusting administrative expenses (e.g. entertainment expense, officers' salaries).
- (11) Adjust promotional expenses and advertising expenses.

Methodology

Questionnaire design

The study of earnings management in China is still at a very preliminary stage. Lacking reliable public data for small and medium sized companies in China, it is difficult to statistically examine the existence of earnings management in Chinese companies. Baralexis (2004) employed an opinion study to collect the opinions of auditors and independent accountants about earnings management in Greece. In this study, we will take a similar approach to explore an overall picture of earnings management in China. Referring to the questionnaire used by Baralexis (2004) and after discussing with some accounting professionals, we designed our own earnings management questionnaire. Since China is now beginning to converge and harmonize its accounting standards with their international counterparts, this questionnaire is believed to be very important toward the ever ongoing development of accounting standards in the mainland.

Our questionnaire includes the 11 earnings management techniques as identified above and the respondent is asked to provide the frequency of usage for each of them. The scale ranges from five (very frequent) to one (very seldom). This exercise of asking the respondent's frequency of usage of the 11 techniques is repeated for each of the four earnings management incentives as discussed earlier. For example, the question asked for the first incentive (external contracts) is written in this way: "From your experience, *for better external contract options, such as debt covenant and sales terms*, your company will manage earnings by choosing the following methods by the frequency of[. . .]." For the second incentive (capital market motivation) we ask: "From your experience, *to influence the stock price or market value of the corporation*, your company will manage earnings by choosing the following methods by the frequency of[. . .]." Then for the third

incentive (regulatory motivation) we ask: "From your experience, *for the consideration of taxation (lowering tax expense)*, your company will manage earnings by choosing the following methods by the frequency of[. . .]." And finally for the fourth incentive (management compensation contracts) we ask: "From your experience, *for better achievement or better compensation*, managers in your company will manage earnings by choosing the following methods by the frequency of[. . .]."

In the next section, we list out the four incentives and ask the respondent to rank their importance from four (highest importance) to one (lowest importance). Then we ask the respondent about the ownership structure of the company. According to the "*Company Law of China*" there are four kinds of ownership namely, state-owned, collectively-owned, foreign-invested and private ownership. So we provide the four options in this question. We also ask about the total asset size of the companies and there are also four options. According to the "Division Standard of Large/Medium/Small Sized Industrial Enterprises" (National Statistic Bureau, 2002), the Chinese government classifies companies into "small companies" (assets less than RMB50 million), "medium companies" (assets from RMB50 million to RMB500 million), "large companies" (assets from RMB500million to RMB5000 million) and "oversized companies" (assets over RMB5000 million). Due to the uneven number of companies of different types and sizes as will be reported later (Table V), when conducting statistical tests, we combine state-owned and collectively-owned companies into one group and foreign and private companies into another. Similarly, small and medium companies are grouped under one category, while large and oversized are grouped under another.

Sample selection and data collection

In this study, we focus on the Guangdong province which has the strongest economy in China. From 2000 to 2004, the Guangdong province had the highest GDP compared with other provinces in China (National Statistics Bureau, 2005). Shenzhen city is one of the biggest cities in the province and in the whole of China and has a stock exchange market. Since the same accounting law and accounting system exists all over the country, we believe the situation in Guangdong can represent to a large extent the situation of earnings management in China.

The study is made up of all the corporate legal entities in the Guangdong province. According to official statistics, up until 31st December, 2001, there were 3,128,000 corporate entities in the Guangdong province (Guangdong Statistics Bureau, 2002). Since it is not possible to obtain detailed and accurate information about all these entities, we are unable to select our sample based on a random process. Therefore, we selected our sample by convenience sampling which means that we distribute the questionnaires to respondents who are easiest to access.

We began to distribute the questionnaires to respondents in March 2005, and the process lasted for about one year. In total, we distributed altogether 1,400 questionnaires in two batches by email, post and hand. The first batch included 800 questionnaires distributed during March 2005, and we collected 81 valid responses. Then we went for a second round to call on the 719 remaining targeted companies which did not respond. Up until August 2005, we collected only 14 valid responses from these 719.

In October 2005, we decided to send questionnaires again to 600 companies contained in the second batch as mentioned above. Until January 2006, we collected 54 valid responses. Similar to the first batch, in February 2006, we also sent

a second round of 546 questionnaires to the companies which did not reply. Until April 2006, we collected 12 valid responses.

Since the whole process had lasted for more than one year, we need to test the existence of any time lag effect. For this purpose, we divided our results into two groups. We treat the 95 samples returned before August 2005 as group 1 and the other 66 samples which were returned after October 2005 as group 2. We wanted to see if there was any significant difference between these two time samples which represented the attribution of respondents at the start of our study and those at the end. The key factors tested include the result of the ranking of incentives and the result of the ownership as well as size. The results are carried in Tables I and II.

In the tables, "time 1" refers to the samples obtained before August 2005, and "time 2" refers to the samples obtained after October 2005. As all the test results are insignificant, this indicates that the two samples do not have significant differences in all key aspects. So we believe that time lag effect does not exist in our sample.

Another problem which may arise is the possible non-response bias caused by the low response rate of our questionnaires. At the end we obtained only 161 useful responses out of the 1,400 questionnaires sent. This represents a response rate of about 11.5 per cent. Although we re-sent the questionnaires a second time to the respondents who did not reply, the result was unsatisfactory. We then sought to determine if there was any significant difference between the responding group and the non-responding group. In the first batch distributed before August 2005, 81 valid responses were obtained. Then we re-sent to those who did not reply and obtained 14 replies. After October 2005, we obtained 54 valid responses from the second batch of questionnaires. Then we re-sent to those who did not reply and obtained 12 replies. Now we can sum up the samples which were obtained by only sending once as the responding group. The total is 135 (81+54). We sum up the samples which were obtained by the second administration as the non-response samples and the total is 26 (14+12).

Table I.
Comparison of incentives
ranking between two
time samples

	Time	N	Mean	t	p
External contract	1	95	2.0316	-0.389	0.698
	2	66	2.0909		
Market value	1	95	2.5684	0.043	0.966
	2	66	2.5606		
Tax consideration	1	95	2.4737	0.021	0.983
	2	66	2.4697		
Management compensation	1	95	2.9368	0.160	0.873
	2	66	2.9091		

Table II.
Comparison of ownership
and size between two
time samples

	Time	N	Mean	t	p
Ownership	1	95	1.6737	0.488	0.626
	2	66	1.6364		
Size	1	95	1.8000	0.863	0.390
	2	66	1.6667		

Now we can conduct an independent sample t test on the two group means to see if they are significantly different. Similar to the previous test, the key factors tested are also the result of the ranking of incentives, the ownership as well as the size. The results are shown in Tables III and IV.

From the tables, we can see that all the test results are insignificant. This indicates that the two samples do not have significant differences in key aspects. So we believe that non-response bias does not exist in our study.

Data analysis

Descriptive statistics

Table V shows the distribution of the responding companies according to company ownership type and size. Table VI shows the distributions again when state-owned and collective-owned companies are combined into public ownership companies and when the foreign invested and private companies are classified into private ownership.

Next, Table VII shows us the overall score distribution of the four incentives. The total score is the sum of the scores for all the individual questionnaires.

As Table VII shows, the accountants and financial managers recognize that management compensation is the most important incentive for practising earnings management. However, market value and debt covenant do not cast heavy pressures

	Group	N	Mean	t	p
External contract	Responding	135	2.0444	- 0.434	0.667
	Non-response	26	2.1154		
Market value	Responding	135	2.6000	0.891	0.374
	Non-response	26	2.3846		
Tax consideration	Responding	135	2.4815	0.238	0.812
	Non-response	26	2.4231		
Management compensation	Responding	135	2.8889	- 0.978	0.330
	Non-response	26	3.1154		

Table III.
Comparison of incentives
ranking between
responding and
non-response groups

	Group	N	Mean	t	p
Ownership	Responding	135	1.6741	0.953	0.342
	Non-response	26	1.5769		
Size	Responding	135	1.7111	- 1.020	0.309
	Non-response	26	1.9231		

Table IV.
Comparison of ownership
and size between
responding and
non-response samples

Ownership	N	Per cent	Asset size	N	Per cent
State-owned	45	28.0	Below 50 million	36	22.4
Foreign-invested	70	43.5	50-500 million	65	40.3
Private	36	22.4	500-5,000 million	51	31.7
Collectively-owned	10	6.1	Above 5,000 million	9	5.6
Total	161	100	Total	161	100

Table V.
Distribution of the
companies

on managers as seen in the Western literature. This result is consistent with our expectation. The Chinese capital market is immature and has less listed companies compared with the US or the UK, so that capital market pressure is not critical for most of the listed companies. As stated earlier, Chinese banks which are also state-owned will lend money to the state-owned companies with no material risk-control (Ren, 2004, p. 63). On the other hand, it is very difficult for private companies to borrow money, even if they have good financial performance. So, it is not surprising to see that external contract incentives are less important for Chinese companies. Next, we show the results by bringing into account the two factors namely, ownership and size.

Incentives: the influence of ownership

As Table VIII shows, the 55 companies under public-ownership rank management compensation as the most important incentive, while the last consideration is to meet external contracts. The ranking is also similar in the situation under private ownership. The only change is a switch in the second and third positions. The result is also consistent with the overall result in Table VII. Next, we will look at each incentive under different groups.

An independent sample *t*-test is applied to each incentive to test for any significant differences between the two ownership groups. The results are shown in Table IX. The third incentive, tax consideration, shows a significant difference in means between the two groups. It appears that privately owned companies pay more attention to tax

Table VI.
Distribution of the
companies (grouped)

Ownership	Number	Per cent	Asset size	Number	Per cent
Public	55	34	Small and medium	101	63
Private	106	66	Large and oversized	60	37
Total	161	100	Total	161	100

Table VII.
Overall ranking of the
four incentives

Incentives	Total score	Ranking
1 External contract	331	4th
2. Market value	413	2nd
3. Tax consideration	398	3rd
4. Management compensation	471	1st

Table VIII.
Ranking of four
incentives by ownership
type

Incentives	Public ownership			Private ownership		
	Sub-sample size	Mean	Rank	Sub-sample size	Mean	Rank
External contract	55	1.98	4	106	2.09	4
Market value	55	2.78	2	106	2.45	3
Tax consideration	55	2.10	3	106	2.66	2
Management compensation	55	3.16	1	106	2.80	1

Notes: ANOVA (public ownership): $F = 16.689$, $df = 219$, $p = 0.000$; ANOVA (private ownership): $F = 8.419$, $df = 423$, $p = 0.000$

expenses than do public companies. This is reasonable because public companies do not have real control over their retained earnings which are in fact owned by the state. The government also has the right to collect tax. So in reality, the allocation of revenue between tax expenses and retained earnings has little influence on the owners' benefit. However, for private companies, less tax expenses directly means more benefits for the shareholders.

Also, a significant difference between the two groups is found under the management compensation incentive. It seems that public companies have a stronger incentive to manage earnings for management compensation when compared with private companies. We present a possible explanation for the result. Compared to the private sector, publicly owned companies usually have many mechanical standards to meet, such as return rate, net income level, growth rate, etc. These standards are set at the beginning of the year and are usually not changeable according to the market environment because they are rigidly set by the government. Completion of these tasks can materially influence the benefit and promotion prospects of the managers. Even though many private companies also have these standards, the situation in public companies is much more common because the government favors to use these standards to assess the managers' performance. Private company managers usually have more chances to communicate with shareholders about the change in the market environment and revise their targets accordingly.

Incentives: the influence of size

Now we will look at the influence of size on the ranking of the four incentives. As Table X shows, the 101 small and medium sized companies rank management compensation as the most important incentive, while meeting external contracts has been ranked as the last consideration. On the other hand, the 60 large and oversized

	Public ownership	Private ownership	<i>t</i>	<i>p</i>
Sample size	55	106		
External contract	1.98	2.09	-0.711	0.478
Market value	2.78	2.45	1.767	0.079
Tax consideration*	2.10	2.66	-2.979	0.003
Management compensation*	3.16	2.80	2.033	0.044

Note: * $p < 0.05$

Table IX.
Means comparison of
four incentives by
ownership type

Incentives	Small and medium sized			Large and oversized		
	Sub-sample size	Mean	Rank	Sub-sample size	Mean	Rank
External contract	101	2.08	4	60	2.02	4
Market value	101	2.25	3	60	3.10	1
Tax consideration	101	2.68	2	60	2.12	3
Management compensation	101	3.01	1	60	2.77	2

Notes: ANOVA (small & medium) $F = 16.3$, $df = 403$, $p = 0.000$; ANOVA (large & oversized) $F = 15.25$, $df = 239$, $p = 0.000$

Table X.
Ranking of four
incentives by company
size

companies rank market value as the most important incentive, while meeting external contracts has been ranked as the last consideration. Next, we investigate each incentive under different size groups.

The result in Table XI indicates that large and oversized companies have much stronger incentives than the other group to manage earnings to maintain or enhance the companies' market value and the difference is very significant. It is logical because small and medium sized companies have little chance to access the capital market so that their market value is less important. However, for big companies, because some of them may be listed companies or working towards an IPO in domestic or overseas capital markets, better reported performance may lead to higher stock prices. Earnings management for market value is regarded as worthy and, therefore, frequently employed by them.

The result also indicates that managers agree small companies are more active in tax expense saving. This is consistent with the situation in Greece as illustrated in Baralexis (2004). Heavy taxation burdens and unequal tax rates in different regions and industries may lead to tax evasion. Tax expense saving is more critical for small companies because retained earnings accumulation is the most important source of funds for future investment and expansion. In China, small and medium sized companies have great difficulty accessing external funding. This can be evidenced by the many incidents of illegal fund-raising in China (Wan, 2003). Many large state-owned companies have to pay a certain amount of tax each year as fixed already by the government. Therefore, large and oversized companies are less interested in tax considerations.

Incentives: different techniques

From Table XII we can see that the most frequently used techniques are technique 7 (related party transaction), technique 8 (operating revenue) and technique 1 (adjusting accounts receivable or bad debt allowance). All other techniques only obtained a frequency of 3 or lower. Our earlier discussion with some accountants and auditors also indicated that these three techniques are the most effective ways to change the reported financial data and they are easy to handle. The other techniques are either too complicated or the effect may be too slight in magnitude. Next, we compare the frequencies for every technique under different incentives.

Table XIII shows the results of the one-way ANOVA tests. The major result comes from the incentive of tax considerations. We can find significant importance for techniques ten (adjusting administration expense) and 11 (adjusting promotion expense and advertising expense). The result of the post hoc tests show that these techniques are used significantly more frequently under tax consideration incentives than the other three incentives. This finding is consistent with the fact that Chinese tax

	Small and medium	Large and oversized	<i>t</i>	<i>p</i>
Sample size	101	60		
External contract	2.08	2.02	0.420	0.675
Market value *	2.25	3.10	-4.968	0.000
Tax consideration *	2.68	2.12	3.130	0.002
Management compensation	3.01	2.77	1.399	0.165

Note: * $p < 0.05$

Table XI.
Means comparison of
four incentives by
company size

No.	Technique	Average frequency
1	Account receivable and bad debt allowance	3.40
2	Gain or loss from disposal	2.72
3	Construction in process	3.06
4	Change the depreciation method	2.59
5	Adjust other revenues and gains	2.98
6	Adjust investment operation	2.76
7	Related party transaction	3.74
8	Operating revenue	3.73
9	Government subsidy	2.25
10	Administrative expense	2.97
11	Selling expense	2.78

Note: ANOVA: $F = 54.893$, $df = 1770$, $p = 0.000$

Table XII.
Average frequencies of
the 11 techniques

Technique	External contract	Market value	Tax consideration	Management compensation	<i>F</i>	<i>p</i>
1*	3.43	3.78	2.67	3.71	25.841	0.000
2	2.59	2.84	2.63	2.81	1.672	0.172
3	3.12	3.09	3.01	3.02	0.346	0.792
4	2.5	2.54	2.68	2.63	0.754	0.520
5*	2.81	2.81	2.88	3.43	10.176	0.000
6*	2.81	2.93	2.45	2.85	4.641	0.003
7*	3.8	4.14	3.17	3.87	19.648	0.000
8*	3.67	3.69	3.61	3.96	2.744	0.042
9	2.3	2.29	2.08	2.35	1.667	0.173
10*	2.78	2.52	3.62	2.97	23.976	0.000
11*	2.5	2.37	3.5	2.75	30.521	0.000

Note: * $p < 0.05$

Table XIII.
Means comparison for 11
techniques under four
incentives

law sets many rigid standards for deductible outgoings such as entertainment and advertising expenses. In fact, these standards are so rigid that many companies will naturally exceed these limits. Adjusting these expenses can manipulate the tax payable materially and, therefore, reclassification and restatement of administrative expenses and selling expenses are common strategies used.

On the other hand, the post hoc tests show (not reported here) that technique one (adjusting accounts receivable or bad debt allowance), technique six (adjusting investment operation) and technique seven (related party transactions) are used significantly less frequently under tax considerations than under the other three incentives. A possible reason is that many small and medium companies that care more about the tax expense have fewer opportunities to invest in other companies due to limited funds. Although related party transactions also scored high in tax considerations, compared with the other incentives the score of 3.17 is relatively low. It can be said that related party transactions are useful for tax expense savings, but are more useful to meeting other goals.

Summary and conclusion

This study aims to present a general picture of earnings management in China by surveying the opinions of accountants and financial managers in Chinese companies. The focus is on the incentives and the techniques of earnings management.

Before summarizing the findings and presenting the conclusion, it must be mentioned here that the convenience sampling, the restricted scope of the samples and the non-response rate are a weakness of this study. It should be noted that data collection in mainland China, especially with a questionnaire involving such a sensitive topic and asking of people's opinions, is a difficult endeavour. The reason is not only a matter of practicality, but also a matter of culture. In any case, as presented in the methodology section, every possible step had been taken within our limited resources to ensure an acceptable amount of data sufficient for analysis.

One important finding of this study is that the operating performance is related to the promotion and compensation of management. This is inconsistent with previous literature which states that capital market pressure is the most important incentive for earnings management (Dechow and Skinner, 2000). On the other hand, it seems that all the managers have not considered debt covenant as a critical driving factor for earnings management.

The ranking of incentives is also influenced by company size and ownership type. Public companies care more about capital market responses than do private companies and this may be due to the special arrangement of the capital market in which public companies have priority to be listed. These public companies pay little attention to tax expenses because the government who levies the tax also has the right to share the profits after tax. While for private companies, tax consideration is much more significant because less tax expense directly means more net profit for the shareholders. Size also significantly impacts on the considerations of the managers. Large and oversized companies usually care more about market value and less about tax considerations, while it is the opposite among small companies.

Different incentives will also influence the specific methods used to manage earnings. Generally speaking, Chinese companies prefer to employ simple, direct and effective ways, such as adjusting accounts receivable and using related parties' transactions to color their financial reports rather than employing complicated techniques, although for tax considerations, there are some special ways to cope with the Chinese taxation law. Reclassification and restatement of administrative expenses and advertising expenses are effective in altering the tax expense.

From this study, we can conclude that earnings management is pervasive in China and managers view earnings management as reasonable and useful. This earnings management dilemma in China is in fact the dilemma of the institutional setting in the market. Here, we can make several points for further consideration.

Firstly, the ownership structure of state-owned companies in the market has blurred the control of the entities. Legally speaking, state-owned companies are owned by the people, although in fact no one claims shares or dividends from the companies. The multi-level principal-agent relationship in the administration of state-owned companies provides many chances for misconduct.

Secondly, the management system also leads to serious earnings management. Top management in state-owned companies are also the government officials and they can skillfully shift between the two identities. In order to be promoted as

high ranking officials, the managers are not appraised in terms of standards set for services provided as government officials. Rather, they are evaluated based on the performance of the company managed by them as reflected by mechanical standards like rate of return, net income level, growth rate and so on. Thus, the mixed identity as corporate manager and government official leads to a strong tendency for state-owned companies to manage earnings.

The weak accounting system is another contributing factor. Chinese accounting standard construction is a patchwork instrument rather than a systematic project. Standards are issued only when some weaknesses are found. The lack of a systematic framework of accounting standards brings many opportunities for earnings management. Another fact that makes the cost of earnings management bearable is that the legal system does not state clearly and in detail the consequences and penalties for managing earnings. Therefore, earnings management cannot be detected easily and appropriately prosecuted.

Last but not least, the inequity of tax status forces most of the small and medium sized companies to manage earnings in order to lower tax expenses. From the above points, we conclude that the institutional setting usually decides the incentives and techniques of earnings management. Our analysis about earnings management is based on the institutional characteristics of the market. The construction of effective accounting standards can only solve part of the problem. The lessening of earnings management and the advancement of accounting information quality should be based on profound reform of the economic and political system. Nevertheless, due to the specificity of the Chinese market, directly applying the experience or methodology from a different market may result in an unrealistic conclusion.

In terms of accounting practices, we call for strict regulations especially on related parties transactions and clear presentation of accounts receivable as well as provisions. Rigorous regulations cannot completely remove earnings management from the market, but it can probably reduce it and provide explicit evidence for detecting and penalizing earnings management behaviors. Changing the institutional arrangement of the capital market to allow more companies with clear ownership structure to be listed, and property rights reform, as well as the improvement of the legal system, are necessary steps to control the prevalence of earnings management.

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