

# Earnings Management Incentives and Techniques in China's Listed Companies: A Case Study

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**Abstract** This paper discusses the factors that motivate China's listed companies to engage in earnings management and the most frequently used earnings management techniques based on Chinese realistic situation, and uses case study method to analyze earnings management incentives of China's listed companies after the Split Share Structure Reform and techniques after China internationalized its accounting standards. The results show that the earning management incentives of capital market considerations are very strong in China's listed companies; after the Split Share Structure Reform, the earning management incentives that listed companies inflate profits and boost share prices for the largest controlling shareholder's reduction exist; earnings management techniques by making use of the weaknesses of the new enterprise accounting standards are used in China's listed companies.

**Key words** Earnings management; Case study; Accounting estimate

## 1 Introduction

Up to date, there is no an agreed definition about earnings management. Schipper (1989) defined earnings management 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)." (Healy and Wahlen 1999) 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." According to the two definitions, earnings management is viewed as a purposeful and deliberate intervention of the external financial reporting, earnings management techniques include not only accounting methods but also non-accounting methods, for example structuring transactions etc. In addition, it is not definitely distinguished whether accounting methods violate generally accepted accounting principles (GAAP) or not.

(Scott 1997) defines earnings management as a selection of accounting policies from a set of GAAP by managers to maximize their own utility and/or the market value of the company. (Ortega and Grant 2003) argue that earnings management uses the flexibility in financial reporting to alter the financial results of the company. From the two definitions, we can see that earnings management techniques only include accounting methods, and the accounting methods used in earnings management can not be permitted to violate GAAP.

(Levit 1998) defines earnings management as a gray area where the accounting is being perverted; where managers are cutting corners; and, where earnings reports reflect the desires of management rather than the underlying financial performance of the company. Levit considers that earnings management is equal to earnings manipulation.

Carlos Noronha and (Yun Zeng 2008) 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.

In this study, earnings management is viewed as a purposeful intervention of the external financial reporting process, with the intention of misleading some stakeholders about the underlying economic performance of the company. Earnings management techniques include both non-accounting methods and accounting methods within GAAP.

## 2 Earnings Management Incentives

As stated by (Healy and Wahlen 1999), managers mainly engage in earnings management for four kinds of incentives namely, external contract incentives, management compensation contract incentives, regulatory motivations and capital market motivations. Do the four kinds of earnings management incentives exist in China's listed companies? In this paper, this question is analyzed as stated below.

### **2.1 To avoid external-contract violations**

External contracts include debt contracts, dividend covenants, supplying contracts etc. As accounting data are used in external contracts, managers can alter accounting data by earnings management to meet the contract requirements. For example debt contract, the use of accounting data in debt contract is observed in China. Chinese banks can require companies to maintain specified levels of debt to equity, interest coverage, or working capital. If these covenants are violated, Chinese banks can impose penalties such as higher interest rates, or constraints on additional borrowing or demanding immediate repayment. Therefore, when companies are close to debt covenants and are likely to violate them, managers have incentives to use earnings management techniques to increase earnings to loosen or postpone the restrictiveness imposed by earnings-based debt covenants. On the other hand, troubled companies have incentives to reduce earnings for contractual renegotiations.

### **2.2 Meeting management compensation contract requirements**

Most management compensation contracts measure the achievement of managers by accounting data such as profit and sales scale, so management compensation contract can drive managers to engage in earning management. For example bonus plans, (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. (Healy 1985) provides the evidence that earnings are managed in the direction that is consistent with maximizing managers' earnings-based bonus awards. When earnings will be below the minimum level required to earn a bonus, the earnings are managed upward so that the minimum is achieved and a bonus is earned. Conversely, when earnings will be above the maximum level at which no additional bonus is paid, then earnings are managed downward. The extra earnings that will not generate extra bonus this current period are saved to be used to earn a bonus in a future period. When earnings are between the minimum and the maximum levels, then earnings are managed upward in order to increase the bonus earned in the current period.

With stock options incentives being applying in Chinese companies in recent years, stock option compensation is associated with earnings management. Since earnings and stock prices are positively related, managers can manage earnings down before scheduled stock option awards. The result is to arbitrarily hold down the stock price before the award, thereby lowering the exercise price and increasing the value of their stock option compensation. On the other hand, managers can also manage earnings up before abnormally large stock option exercise. Inflating earnings in the pre-exercise period can increase the cash payout from option exercises. Because option exercises occur rarely in Chinese companies, some studies on the relationship between stock option compensation and earnings management are mainly concerned with stock option awards. (Yu 2009) provides the evidence that managers manage earnings down through discretionary accruals before scheduled stock option awards, and these discretionary accruals reverse in the post-award period.

### **2.3 To avoid regulatory and minimize political costs**

Due to anti-trust considerations, some companies have the incentive to lower earnings in order to minimize political costs associated with being seen as too profitable. In China, anti-trust regulations and industry-specific regulations for earnings are rare. The most important regulatory motivation for Chinese companies is tax considerations. Especially for small sized and private ownership companies, earnings management for tax-planning purpose may be prevalent in practice in China.

### **2.4 Due to capital market considerations**

Capital market motivations have been recognized as the most important reason for managers to manage earnings. For Chinese companies, the most important capital market considerations may come from the regulatory framework, which is a series of guidelines issued by the China Securities Regulatory Commission (CSRC).

#### **2.4.1 IPO and earnings management**

In China, issuing companies have incentives to engage in earnings management for satisfaction of legal requirements, higher offering price etc. (Lin and wei 2000) used the ROA as measurement index, examined the earnings performance surrounding the Chinese A-share companies' IPOs during the 1992-1995 period, And found that the reported earning of A-share companies peak one or two years before the IPO year, and earnings decline significantly in the IPO year instead of rising or dropping slightly. (Chen 2010) examined the relationship between pre-IPO earning management and post-IPO performance using 247 IPO companies as the sample in A-share market of Shanghai and Shenzhen Stock Exchange during 2001-2005, and found that the degree of earnings management in the pre-IPO years can be used to predicate the post-IPO performance of IPO companies to some extent, and the more the degree of pre-IPO positive earnings management, the more the post-IPO performance declines, i.e..

The behavior of positive earnings management in the pre-IPO years will result in the decline in the post-IPO performance of IPO companies.

#### 2.4.2 Stock right issues and earnings management

Stock right issue is an important financing source for most of the listed companies in China, meanwhile the CSRC required companies to meet certain levels of profitability to be qualified for stock right issues, so managers have strong incentives to manager earnings to be qualified for stock right issues.

In China, with the change of earnings-based stock right issue rule, earnings management phenomena changed too. During the period 1996-1998, the CSRC required that companies had to report the rate of return on common stockholder's equity (ROE) over 10 percent for three consecutive years if they wanted to apply for stock rights issues. For companies in the energy, raw materials, and infrastructure industries, the required ROE could be lowered to 9 percent. This regulation resulted in a "10 percent phenomena". (Jiang and Wei 1998) examined the relationship between stock right issue rule and earnings management based on ROE disclosed by annual report of the listed companies in Shanghai and Shenzhen Stock Exchange during 1993-1997, and found the abnormally high percentage of companies that reported ROE marginally higher than 10 percent. (Chen *et al.* 2000) also provided evidence that companies whose ROEs were slightly above 10 percent had unusual increase in accounts receivable (as a percentage of sales). The CSRC altered the earnings-based stock right issue rule in early 1999, this new rule requires ROE be no less than 6 percent for each of the previous three years and the average ROE for these three years should exceed 10 percent. After the new rule were carried out, (Yan *et al.* 2000) found that ROE distribution of China's listed companies showed apparent 6 percent and 10 percent phenomena. These studies suggested that managers have incentives to engage in earnings management so that the ROE can meet the threshold for rights issue in China's listed companies.

#### 2.4.3 Loss companies and earnings management

The CSRC made some penalty policies for Chinese loss listed companies, saying: "For those companies that have suffered losses for two years in succession, the CSRC will give them special treatment; and for those companies that have suffered losses for three years in succession, the CSRC will have them delisted." Being given special treatment (ST), or particular transfer (PT) or being delisted will become obviously unfavourable to the listed companies themselves, their shareholders, their management, and the government offices concerned. As such, all of them will have the motivation to take all kinds of earnings management techniques so as to maximize their utility.

To the managers who try to window dress the financial reports of their companies, if their companies will suffer light losses in the current year, they will try to make their companies profitable by earnings management techniques. If their companies' financial situations are very bad in the current year so that it is impossible to make their companies profitable, they will take a big bath by earnings management techniques to make their companies suffer heavy losses in the current year, and expand the space for earnings management in the next year. If their companies suffered losses in the previous year, they will have a strong motivation to inflate earnings in the current year in order to avoid special treatment.

### 3 Earnings Management Techniques Used in China

Managers usually use both accounting methods and non-accounting methods to engage in earnings management in China's listed companies. Accounting methods mainly include accounting policy choices and changes, accounting estimates and changes etc.; managers engage in earnings management using non-accounting methods, primarily through structuring transactions to achieve, for example, asset restructuring, debt restructuring and related transactions etc.

#### 3.1 Accounting methods

Chinese GAAP offers some flexibility in preparing the financial statements and gives the financial managers some freedom to select among accounting policies and alternatives. Earnings management uses the flexibility in financial reporting to alter the financial results of the company so as to achieve a predetermined target set by the management.

##### 3.1.1 Changing the depreciation methods and/or period

Depreciation expenses can be managed by changing the depreciation methods and/or period. Chinese GAAP allows companies to change depreciation methods and period to reflect the real economic situation, so some companies change depreciation methods and/or period to manage the reported earnings. For example, Haide Polyester Plant that is the wholly owned subsidiary of Qiong

Haide changed the depreciation methods from Straight Line Method to Production Method since January 1997. Polyester market was weak in 1997, production of Haide Polyester Plant decreased. However, although fixed assets of Haide Polyester Plant increased by 12 percent in 1997, its depreciation expenses decreased by RMB 3.82 million in 1997. As a result, Qiong Haide's ROE in 1997 reached 10.49 percent, and broke the threshold for stock right issues.

### 3.1.2 Using the asset impairment

According to Chinese GAAP, companies should consider conservatism principle and judge whether the assets have been impaired on the balance sheet day, including short-term investments, accounts receivable, inventories, goodwill, long-term equity investments, fixed assets, construction in progress and intangible assets. If there are objective evidences proving that the assets have been impaired, the impairment provisions shall be set aside.

1) Making use of that the impairment provisions of short-term asset are set aside and reversed to manage earnings. Chinese GAAP permits reversals for the impairment provisions of the short-term assets, such as accounts receivable, inventories, financial assets etc. This regulation provides managers opportunities to manage earnings. For example, managers can increase the amounts that the impairments provisions of short-term asset are set aside in current year, this leads to lower reported earnings in current year. These lower earnings, however, create unrecorded reserves; managers have more flexibility to report more income in the future by reversals for the impairment provisions of the short-term asset. That is to say, managers can increase reserves, and so reduce earnings, by setting aside the impairment provisions of the short-term asset; managers can also release reserves and create additional earnings, by reversals for the impairment provisions of the short-term asset.

2) Making use of long-term asset impairment to manage earnings. According to the CAS#8 "Asset Impairment", for fixed assets, intangible assets, goodwill, long-term equity investments and other long-term assets, once asset impairment losses were recognized, they can not be reversed in a subsequent period, and are only allowed to conduct accounting treatment when assets are disposed of. Meanwhile, after assets impairment losses were recognized, the depreciation or amortization expenses of impairment assets should be adjusted accordingly in future periods in order to allocate systematically the adjusted book value of assets (deduct estimated net salvage value) within the remaining useful life.

Take fixed assets for example, managers can low earnings in current year by setting aside fixed asset impairment provisions, as asset impairment losses can not be reversed, and the amount of depreciation will be re-adjusted within the remaining useful life of fixed assets, so the amount of depreciation will decrease and earnings will increase in the next year.

## 3.2 Non-accounting methods

The main focus of earnings management is not only on the GAAP-based earnings managements activities referring to the timing and recognition of revenues and expenses. Earnings management also include operational or real activities which deal with voluntary business decisions like structuring transactions such as asset restructuring, debt restructuring, related party transactions and receiving revenue form government subsidies.

### 3.2.1 Asset restructuring

The main methods of asset restructuring include mergers and acquisitions, asset replacement, transfer of assets and equity transfer. In china, listed companies usually make use of asset restructuring in earnings management. Listed companies increase their reported earnings by merging with the companies with good performance and exchanging their non-performing assets for high-quality assets of affiliated enterprises (mainly parent companies).

### 3.2.2 Debt restructuring

According to the CAS#12 "Debt Restructuring", a debt restructuring is an event in which a debtor is in financial difficulty and a creditor grants a concession to the debtor in accordance with a mutual agreement or the ruling of court. Four types of debts restructuring include (1) satisfaction of a debt by a transfer of assets; (2) conversion of a debt into capital; (3) modification of the terms of a debt, other than by the types as referred to in (1) and (2); and (4) a combination of (1) to (3). The debt restructuring standard prescribes that the amount of debtor's liabilities waived or reduced because of the concessions of creditor shall be recorded into the profits and losses of the current period, and the fair value is used in the business that the debtor transfer non-cash assets to the creditor in satisfaction of the debt. Therefore, listed companies with loss in the previous year are likely to change the profits and losses of the current period by the recognition of gains of debt restructuring.

In addition, Chinese local governments usually give subsidies to some important listed companies to improve their performance so as to meet some capital market requirements, and related party

transactions are common in the mainland. Therefore, the two kinds of earnings management techniques are also important in China, and they cannot be ignored.

## 4 Case Study

### 4.1 Case description

Harbin Air Conditioning Co., Ltd. (referred to as Ha Kongtiao) has gone public on Shanghai Stock Exchange since June 3, 1999. The main products of company include air-cooling equipments, air conditioning equipments and energy-saving heat exchangers. Ha Kongtiao is one of the 500 mechanical industrial enterprises of China, and its domestic market share of the petrochemical air cooler is above 50 percent.

July 31, 2007, Ha Kongtiao released the Semi Annual Report of 2007 on the matter of changes in accounting estimates as follows: Our company altered the method that bad debt provisions for accounts receivable were set aside since January 1, 2007, changed from Aging Analysis Approach to Delinquency Flow Model Method, this modification based on the "Accounting Standards for Enterprises: Application Guide". This change in accounting estimates resulted in the current profit increases by RMB 28 165 481.77 Yuan.

Table 1 presents the amounts that bad debt provisions for accounts receivable were set aside according to old and new accounting estimates policies.

**Table 1 The Comparison of Old and New Accounting Estimates Policies on Bad Debt Provisions**

Category	2007.06.30 (Delinquency Flow Model Method)			2006.12.31 (Aging Analysis Approach)			
	Account Receivable	Percent	Bad Debt Provision	Account Balance Age	Account Receivable	Percent	Bad Debt Provision
Normal	545 918 836.11	75.01	10 700 934.77	Less than One Year	424 806 245.26	74.75	21 240 312.28
Special Mention	136 294 196.42	18.73	2 671 366.25	One-Two Year(s)	119 890 743.80	21.10	11 989 074.39
Substandard	35 558 189.48	4.88	696 940.51	Two-Three Years	7 944 380.95	1.40	2 383 314.30
Doubtful	7 829 791.75	1.08	153 463.92	Three-Four Years	6 092 527.92	1.07	3 046 263.98
Loss	2 189 706.56	0.30	42 918.25	Four-Five Years	4 247 201.53	0.75	3 397 761.23
				More than Five Years	5 344 758.43	0.93	5 344 758.43
Total	727 790 720.32	100	14 265 623.70	Total	568 325 857.89	100	47 401 484.61

As shown in Table 1, the amount of accounts receivable increases from RMB 568 million Yuan in 2006 to RMB 728 million Yuan in 2007, an increase of RMB 160 million Yuan, while the amount of bad debt provisions decreases from RMB 47 million Yuan in 2006 to RMB 14 million Yuan in 2007, a decrease of RMB 33 million Yuan.

March 12, 2008, Ha Kongtiao published the 2007 Annual Report. The report disclosed the method that bad debt provisions for accounts receivable were set aside changed from Aging Analysis Approach to Delinquency Flow Model Method from January 1, 2007 to December 31, 2007. As a result, the amount that bad debt provisions were set aside decreased by RMB 50.2034 million Yuan in 2007, and the current net profit increased by RMB 41.1654 million Yuan, accounting for 17.47% of total net profit of 2007.

Ha Kongtiao said, the reasons that the method that bad debt provisions for accounts receivable were set aside was altered since January 1, 2007 were as follows: (1) The main products were mostly used for the new projects or reconstruction project of the key power stations and petrochemical included in the national plan, construction funds were assured; (2) product contract amounts were larger; (3) Settlement cycles of product contract were long, usually 2 to 3 years, some longer.

Based on the above situation, Ha Kongtiao considered that if Aging Analysis Approach was adopted the actual losses of bad debts of accounts receivable were fewer, but the amount of bad debt provisions would be larger. Ha Kongtiao said, by statistics, the actual average annual loss rate of bad debt of accounts receivable was 0.85 percent before 2007. In 2007, the comprehensive loss rate would

be 0.95 percent if Delinquency Flow Model Method was adopted, 7.09 percent if Aging Analysis Approach was adopted. Thus, Ha Kongtiao believed that Delinquency Flow Model Method would be more in line with the actual situation of Ha Kongtiao.

#### 4.2 Case analysis

Ha Kongtiao carried out independent test and combination test for the impairments of accounts receivable. The top 10 in single amount of accounts receivable were listed as the items with significant single amounts, and the independent impairment tests were made on them. Upon independent test, the accounts receivable with significant single amounts has not been impaired, they were included in a combination of the other accounts receivable to conduct another impairment test, and the bad debt provisions were set aside by Delinquency Flow Model Method.

In the Interim Financial Report 2007 of Ha Kongtiao, the amount of the accounts receivable with significant single amounts was RMB 274 million Yuan, accounting for 37.65% of total accounts receivable. The amounts that the bad debt provisions for the accounts receivable with significant single amounts were set aside have a very large impact on the amounts of all bad debt provisions. So, how did Ha Kongtiao independently set aside the bad debt provisions for the accounts receivable with significant single amounts? Meanwhile, according to a recent study by Yang *et al.* (2009), 26 representative samples were extracted from the listed companies in the same industry as Ha Kongtiao, by calculating, the average comprehensive ratio that bad debt provisions were set aside was 14.66 percent in 2006, and 15.42 percent in 2007. For these sample companies, the average comprehensive ratio has no obvious change in 2007 compared with that in 2006, while Ha Kongtiao's average comprehensive ratio that bad debt provisions were set aside by Delinquency Flow Model Method was 0.95 percent in 2007. There were large differences in the average comprehensive ratio in 2007 that bad debt provisions were set aside between Ha Kongtiao and the sample companies.

From information disclosure, Ha Kongtiao revealed a net profit growth rate of 171.34 percent in the Semi Annual Report 2007, 409.11 percent in the Third Quarterly Report 2007, and 118.98 percent in the Annual Report 2007. Meanwhile, shares of Ha Kongtiao closed at RMB 6.58 Yuan at the end of 2006, RMB 22 Yuan at the end of 2007, and up to RMB 29.78 Yuan in February 2008. Share price of Ha Kongtiao rose far higher than the Shanghai Stock Exchange Composite Index over the same period. After share price of Ha Kongtiao rose, its largest controlling shareholder of Harbin Institute of Technology Assets Management Co., Ltd. reduced 12 286 560 shares of Ha Kongtiao in five installments during the period December 2007 to February 2008.

Table 2 presents the largest controlling shareholder's reductions in five installments.

**Table 2 The Largest Controlling Shareholder's Reductions in Five Installments**

Announcement Date	Reduction Time	Reduction Percentage	Average Reduction Price (RMB Yuan/share)	Reduction Shares (share)	Holding Proportion after Reduction (%)
2007.12.25	2007.12.11-12.22	1.12	21.20	2 754 383	45.56
2007.12.29	2007.12.22-12.27	1.02	22.29	2 494 458	44.55
2008.1.9	2007.12.27-2008.1.7	1.50	23.29	3 694 719	43.05
2008.1.25	2008.1.7-1.22	0.90	25.61	1 563 000	42.45
2008.2.29	2008.1.22-2.27	0.72	23.51	1 780 000	41.73
Total		5.26		12 286 560	

In 2006, Ha Kongtiao formulated and published the Split Share Structure Reform Plan. On August 31, 2007, Ha Kongtiao released an announcement as follows: "12 286 560 tradable shares with restricted conditions would be listed for trade since September 5, 2007." On the face of it, Ha Kongtiao engaged in earnings management by altering the method that bad debt provisions for accounts receivable were set aside, inflated profits, boosted share price and purposely make opportunities for the largest controlling shareholder to reduce shares at high share prices to cash out.

## 5 Conclusion

This study presents a general picture of earnings management in China's Listed Companies, and the focus is on the incentives and the techniques of earnings management.

Firstly, according to the four kinds of earnings management incentives stated by (Healy and Wahlen 1999), the earnings management incentives of China's listed companies were studied based on Chinese realistic situation in this paper. This study showed that the earnings management incentives of

avoiding external-contract violations and meeting management compensation contract requirements exist in china's listed companies, but those of anti-trust regulations and industry-specific regulations are rare, and for small sized and private ownership companies, the earnings management incentives of tax-planning purpose is strong in china. Meanwhile, due to the dilemma of the institutional arrangements of the capital market, the earning management incentives of capital market considerations are also very strong in China's listed companies.

Secondly, the earning management techniques used in China's listed companies were studied in this paper. This study showed that managers usually use both accounting and non-accounting methods to manage earnings in China's listed companies. Accounting methods mainly include the changes of depreciation method or period and the method that asset impairment provisions are set aside. Non-accounting methods mainly include asset restructuring, debt restructuring, revenue from government subsidies and related party transactions. Although China has been making progress in internationalizing its financial reporting system, earnings management from legitimate accounting choices to fraud that violates GAAP is popular in China's listed companies. The fundamental reason for this problem is the institutional characteristics of the Chinese market. Meanwhile, as the legal system does not state clearly and in detail the consequences and penalties for managing earnings, so earnings management can not be usually detected easily and appropriately prosecuted.

Finally, Ha Kongtiao case was analyzed in this paper. Ha Kongtiao altered the method that bad debt provisions for accounts receivable were set aside from Aging Analysis Approach to Delinquency Flow Model Method since January 1, 2007. The changes result in a series of surprise net profit growths. As the phenomenon of investors' functional fixation on the reaction to the accounting earnings exist in Chinese securities market, investors can't see through the financial reporting of listed companies, so the share price of Ha Kongtiao sharply rose with significant net profit increase. This analysis showed that Ha Kongtiao made opportunities by earnings management for the largest controlling shareholder's cashing out at high share prices.

This study concludes that earnings management is pervasive in China's listed companies. Earnings management makes earnings less reliable as a measure of company performance, if the true performance of the company is hidden, there is potential for less efficient resource allocation decisions. Therefore, it is necessary that the prevalence of earnings management is controlled by constructing the effective accounting standards, changing the institutional arrangement of the capital market, improving the legal system and reforming the economic and political system.

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