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Does Earnings Management Reflect Real Condition of Listed Companies or It Does Whitewashing

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Abstract: This paper investigates the action、the motivation and the character of earnings management in the process of IPO using a sample of 281 IPO firms in the Growing Enterprise Market(GEM) of A-share market of Shenzhen Stock Exchange during 2009~2011. First, the evidence result shows that these listed companies revise earnings upwards in the year of issuance, while revise earnings downwards in the first year of post-IPO. Second, there is a significant correlation between these listed companies' initial offering prices and the level of earnings management which illustrate one of the motivations of earnings management is the high initial offering price, even though this correlation between them is weak. Third, the level of earnings management of those listed companies who belong to manufacturing industry is less than that of those listed companies who don't belong to manufacturing industry in the year of issuance.

Keywords: Earnings Management, GEM, IPO, Initial Offering Price

1. Introduction

This paper investigates Chinese IPO (Initial Public Offering) firms' over-propaganda action of earnings management in the process of IPO in the GEM (Growing enterprise Market).Over-propaganda during the issuance of new shares is one of the biggest threatening in Chinese market, this phenomenon actually exists in publisher's business performance. This paper analyzes the changes and character of DA (discretionary accruals) of IPO firms in the GEM, explains the loopholes of GEM distribution, and gives the conclusions and solutions of this case.

Compare to the condition of A-shares appear on the market, the profit standard and net profit set by GEM are lower than main board requirement, medium and small businesses with creativity have opportunities to IPO in the GEM successfully, on the other hand, the publishing standard of GEM motivate that publishers might reflect achievement growth through smooth performance.

China launched GEM in 2009, compare to main board of A-shares and SMB (small and medium business) board, GEM exerts unique impact on enhancing capacity for independent innovation of SMB, promoting high-growth ability and providing more investment opportunities for investors. In these three years, more than 300 enterprises have succeeded in IPO at GEM, encouraging that they focus on development. Meanwhile, 'Three High' (High Price of Publishing, High Price Earnings Ratio and High Over-Raised Fund) phenomena, declining performance of GEM after businesses went to public and big drop of GEM index make study group have reasons to suspect that if they conduct profit management around IPO. During issuance period, there is badly information asymmetry between publishers and investors. Therefore, investors can only saw business financial condition from publisher's transaction, then, they made their own investment decision. The high earnings might cause high publishing price directly. Because the most listed companies are private enterprises before they went to public, also, high share price can help that shareholders earn profit rapidly after on the market, that's the reason of requestor of companies' management layer making decisions on earnings management for high price of publishing.

The empirical analysis of study group adopted the model that based on Modified Cross Section Jones Model. This model used discretionary part of total accrued profits to measure the levels of earnings management. The model controlled accrued profits that influenced by economic

condition preferably. The errors are smaller according to other scholars' researches.

This paper might make contributions below: (1) Break the limits that the lack of samples of earnings management because of companies appeared on market in batches at GEM. This paper used regression equation during absolute years, it is able to make sure that samples be the same throughout macro-economic environment, and measure publisher's earnings management level around IPO. Compared to previous studies, this paper has much amount of samples, and the time is more accurate. (2)Investigate character of GEM issuance and actions of earnings management by empirical study, combining issuance character in the GEM. Investigate correlation between high offering price and the level of earnings management by empirical study, aiming at the 'Three High'; followed by businesses guide during the publishing, studying the differences between manufacture and non-manufacture. (3) The result of the study can be guidance for investors and regulator.

In the view of the structure of this paper, the second part are study basis and system background, the third part build samples hypothesis and model, the forth part does empirical design, the fifth part includes empirical study and result analysis, the last part makes conclusion and provides suggestion.

2. The Basis of Study and System Background

2.1. The Basis of Study

Earnings management is one of most important direction in accounting since the early nineteen eighties. Earnings, also the profit of companies, as the significant details of accounting information, earnings is the reflection of financial status and business results, especially it becomes a signal of earnings information from initial business, therefore it will get greatest concern from the most of investors, similarly, securities regulators ask for high quality information of initial market could be a reasonable requirement. As the reflection of financial status, profit affects vital interests of stakeholders. Every escrow is opportunism, they followed the business earnings to modify their business relationship, make profit maximum. As the decision maker and discloser of accounting information, senior managers keep doing information disclosure for their own profit.

Earnings management is meaningful because people have many different point of views, majority of business men are unable to decide which meaning is right. Binghong Zhang(2011) pointed out that Chinese earnings management has three categories, the "Earnings Management of Institutional View", the "Earnings Management of Economic consequences view" and the "Earnings Management of Information View". From the institutional view of earnings management the companies managers controlled the earnings by using the disadvantages of accrual basis and accounting standard, and picking accounting solution, changing the

earnings differences during the different accounting period; from the view of information, profit on data (report benefit) would increase or decrease by changing earnings management, it affected beneficiaries' decisions; from the economic consequences view, cashing flow of business profit would not changed by earnings management, but earnings management would change data during the profit changing.

XiaoBing Hui and FangZheng Chen (1999) came out eight earnings management motives of initial companies, they include reward contract motive, IPO, rationed shares motive, the motive of keeping the honor, bank loan motive, motive of senior staff placement, market motive and taxes motive.

Currently, the models of studying earnings management are three categories, "Total Accrued Profit model", "Specific Accrued Profit model" and "Earnings Frequency Distribution model", "Total Accrued Profit model" is the most extensive in study of earnings management, the Jones(1991) model has the more impact. The main study is about discussing the measurement of earnings management model and analyzing, this can reduce errors, and conclusion of essay is more persuasive. Dechow (1995) is the first person who assessed the effects of earnings management model, and she had a conclusion, Jones model after modified is the most convincing, and his model also laid a good foundation on earnings management. LiJun Xia(2003) found out that modified Jones model could be better on estimating excess accrual based on cross section of industry classification.

Nowadays, there are three ways of studying Chinese earnings management in GEM, (1) Does distribution system of GEM induce the actions of earnings management in listing companies? As the issue term with second sets of standards, distribution system reflects the growth requirement of businesses. (2) Does every character of listing companies affect standard of earnings management on GEM? Including ownership structure, risk capital rate, internal governance structure, etc. (3)The relationship between the character and earnings management during the listing companies on GEM, such as "Three High" (High Price of Publishing, High Price Earnings Ratio and High Over Raised Fund).

Overall, worldwide scholars have studied concept, character, motive, model and the affection of earnings management. Some of Chinese scholars studied the relationship between the action of earnings management and GEM, then they dedicate a lot great suggestion provided market with conclusion and decision.

2.2. System Background

During the national twelfth five-year plan period, Chinese economic development is changing. China sticks to the implementation of independent innovation and becomes innovative country. China published GEM in 2009. Compared to A-shares and SMB (small and middle business) board, GEM enforced the creativity of medium and small business, promoted their growth and provided more opportunities for investors. In these three years, more than 300 enterprises have succeeded in IPO at GEM encouraging that they focus on development.

'Interim Measures on Administration of Initial Public Offering and Listing on Growth Enterprise Board' (May 1st, 2009) set that publishers are eligible when they IPO on GEM. One of condition is earnings requirement. The second rule of accounting condition is that making profit in the recent two consecutive years, with accumulative net profit of not less than RMB10 million in the recent two years and with a continuous growth; or, making profit in the most recent year, with the net profit of not less than RMB 5 million, the business income of not less than RMB 50 million in the most recent year and the growth rate of business income of not lower than 30% in the recent two years. Net profit shall be calculated on the basis of the amount before or after deducting the excluding extraordinary profit and loss, whichever is smaller.

Compared to A-shares main board, the requirement of 'the net profit not less than RMB 30 million within 3 years' is higher than earnings requirement in Chinese growing enterprise market, however, Chinese GEM earnings requirement is still higher than GEM from other countries and areas. The one requirement of NASDAQ initial listing, "The gross profit include 100 million U.S dollar in a fiscal year or two years of most recent three years. Other requirements have no rules about financial profit, gross profit and net profit; Hong Kong GEM has no requirement about earnings. As we see, the requirement of earnings is too high.

This high requirement setting might cause many adverse effects. Such as: (1) Current earnings standard hard to adapt innovative companies' requirement. Those companies put too much concerns on market extension, research and development, but earnings ability is hard to see. Innovative companies are still "hungry for money". There are 277 Chinese companies established oversea after two years of GEM published, such as IT corporate champion; (2) There are some over-propaganda behaviors during IPO. Publishers chose wrong way for IPO successfully, and made a perfect achievement through earnings management. (For example, early recognition of revenue, deferred revenue) From the result, during the examining period, there are 9 out of 69 listed enterprises had failed in 2009, and 13 out of 156 listed enterprises had failed in 2010, and there are 15 out of 127 listed enterprises had failed. The accounting result from those failed companies showed that their earnings per share, net profit per share, net assets income are higher than other companies, examination committee paid too much attention on profit index, they need found out prettified data, and this would cause that they might neglecting one or the other, the information disclosed are not effective monitored, risk capital of investors. Similarly, "Three High" (High Price of Publishing, High Price Earnings Ratio and High Over-Raised Fund) could also make investors that they suspect securities regulatory commission of making decision, even distrust.

The price of share not only estimating and writing the study report, also include specific communication, negotiating inquiry, bidding and other activities. According to the Securities Law, Article 34, if shares are issued at a premium, the issuing price shall be determined through consultations between the issuer and the securities company who is handling the distribution. The " Measures for the Administration of Securities Issuance and Underwriting" written by China Securities Regulatory Commission (2006), in article 37, "When a listed company makes non-public issuance of securities, it shall comply with the relevant provisions of the CSRC on securities issuance by listed companies in choosing issuing objects and determining the quantities." Pricing stock is a multi-aspect process, it has complexity. During listed companies are growing, "Three High" affects the development of those companies. There are other threats such as "give present" to participate in quotation, "get profit" to participate in subscription, "gambling lottery" to participate in speculation. From the point of earnings management, the history of listing companies could be over-propaganda, therefore, the estimate price is not reasonable based on history business, another side, estimate earning of listed might be higher than it should be, it also caused higher stock price.

Regard to character of listed companies at GEM. There are 90% well-paid enterprises, half of which are IT, new energy and other strategic emerging industries, because China supports those industries for developing capital market. Recently, China Securities Regulatory Commission is considering further plan about character requirements of industries at GEM. The standard followed 9 major industries in "Guidelines for Further Work on the Recommendation of the GEM", 10 major industries, 137 high technological industries in "The Current Priority Areas for The Development of High - Tech Industrialization", it means that GEM has an obvious industrial guide. Other regions and countries have no restrict industry of listing companies, such as IT industries dominant American NASDAQ after long time competition, so, the different industries would have affection on earnings management in China.

From all above, Chinese distribution system is not reasonable at GEM. Some of systems might induce earnings management, stock market and transaction of secondary market. They all go against most investors.

3. Study Hypothesis and Model Construction

3.1. Study Hypothesis

The process of IPO makes people suspect on earnings management, because it provides motives and chances for issuers to implement earnings management.

Hypothesis One: Listed companies made earnings management after IPO at GEM.

Chinese GEM examination includes publishing condition of financial situation. In the process of approval at GEM, CSRC estimated the abilities of listing companies by according to the requirements of "Interim Measures on Administration of Initial Public Offering and Listening Growth Enterprise Board". Issue conditions explicit that listing companies use net profit and operating income and others earnings requirement, it makes that listing companies make earnings management for IPO successfully. Therefore,

study group came out with Hypothesis one, listed companies made earnings management after IPO in GEM.

Hypothesis Two: IPO enterprises made earnings management because of higher issue price.

During the publishing, there are much misfit information between investors and publishers. Publisher were usually unknown to public before companies listed, social media didn't spend a lot of time on them, investors can only make decisions by following publishers' information, the most important are asset size, growth of performance and others financial situation. As hypothesis, the method of earnings management are growth and hidden, publishers could made earnings management through the profit, but this makes that investors don't understand the standard of earnings management. The high stock price has bought by more earnings management information. On the other hand, most of publishers were from private enterprises, and higher stock price might earn much money for shareholders. That's the reason why shareholders made earnings management. For hypothesis two: IPO enterprises made earnings management for higher issue price, and for earning much money.

Hypothesis Three: The level of non-manufacturing companies' earnings management is higher than manufacturing companies' earnings management in GEM.

Currently, the majority of listed companies are manufacturing companies in GEM. It reflects the character of Chinese industrialization. Compared to manufacturing companies, other non-manufacturing companies such as IT, they have greater risks because their financial instability, but they need followed the same rules to come to the market, so this made that non-manufacturing companies have more probability to make earnings management. For hypothesis three, the level of non-manufacturing companies' earnings management is higher than manufacturing companies'.

Also, the top managers have chances to control earnings management. In China, listed companies are allowed to make restatement about their balance sheets. Because there are many new listed companies at Chinese GEM, finance is not perfect, therefore it caused that most of businesses have restatement of balance sheets. Restatement provides managers with free space to manage business earnings. However, accounting policy are selective, financial staff are able to consider and decide, including choice of accounting, application of accounting and asset purchase, time management, etc.

During the publishing period, some reasons restricted the space of earnings management. Certified public accountants (CPA) should audit balance sheet, sponsors should oversee publishers, and time of supervision should be longer (longer than one accounting year at GEM), some of these intermediaries could help prevent earnings management.

3.2. Model Construction

3.2.1. Measurement of Earnings Management Level

To test hypothesis one, we estimate the earnings management level of sample companies at first. Empirical accounting think, earnings has two parts, one is the real flowing cash (Cash Flow of operations), another part is unreal flowing cash, this part followed accrual basis principle, but there is no flowing cash, so it's called Total Accruals. The formulation of Total Accruals is below:

$$Total\ Accruals \equiv Net\ Income - Cash\ Flows\ of\ Operations \quad (3\text{-}1)$$

Jones used the model to calculate accruals, it is Jones model. In this model, total accruals can be discretionary accruals and non-discretionary accruals, discretionary accruals can be used in measurement of earnings management. The formulation of discretionary accruals is below:

$$Discretionary\ Accruals \equiv Total\ Accruals - Nondiscretionary\ Accruals \quad (3\text{-}2)$$

Jones model adopts time series data, and it has restriction. So, continuously, many scholars modified the model. Defond (1994) modified it, which based on cross section data model. One of IPO firms in this paper has total accruals that based on the same year. Therefore, one enterprise IPO used least square method to calculated cross section data at t year:

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_0\left(\frac{1}{A_{i,t-1}}\right) + \alpha_1\left(\frac{\Delta REV_{i,t}}{A_{i,t-1}}\right) + \alpha_2\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \quad (3\text{-}3)$$

From the formulation above, ΔREV means sales variables, PPE means fixed assets, A means total assets, ΔREV means receivable accounts variables. Because managers could control credit policy, receivable accounts variables should be removed from sales variables, thus formulation of total non-discretionary accruals should be below:

$$NDA_{i,t} = \hat{\alpha}_0\left(\frac{1}{A_{i,t-1}}\right) + \hat{\alpha}_1\left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \hat{\alpha}_2\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) \quad (3\text{-}4)$$

$\hat{\alpha}_0$ means intercept estimated values, $\hat{\alpha}_1$ and $\hat{\alpha}_2$ are both estimated slope coefficient of IPO enterprises. Discretionary accruals is residual of formulation 3-3, it is showing below:

$$DA_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - NDA_{i,t} \quad (3\text{-}5)$$

3.2.2. Stock Pricing Model

Estimated model of stock has many types, including traditional valuation method, relative valuation method and option valuation method. Frequently-used method in new listing stock is the P/E ratio multiplier method of relative valuation method. The majority of new listing companies use this kind of method, the formulation is below:

$$PE = \frac{Price}{EPS} \quad (3\text{-}6)$$

$$Issue\ Price = Issue\ PE \times Issue\ EPS \quad (3\text{-}7)$$

$$EPS = \frac{Earnings}{Quantity} \quad (3\text{-}8)$$

During the testing of hypothesis two, the theoretical basis of this article is the model that widely used in the main board, SMB board and GEM — Earnings Ratio model.

3.2.3. Modified Jones Model in Industrial Classification

The paper based on the cross section Jones model of

industrial classification during testing the hypothesis three. According to industrial classification information of Resset Database and Shenzhen stock exchange, this context divided samples to manufacturing companies and non-manufacturing companies. And the discretionary accruals in hypothesis three was calculated by regression results in different industries, this is the difference between 3-3 (other formulation earnings management are the same). One IPO enterprise's total accrual was estimated in same industry in fixed year, the calculation is below:

$$\frac{TA_{j,t}}{A_{j,t-1}} = \alpha_0 \left(\frac{1}{A_{j,t-1}}\right) + \alpha_1 \left(\frac{\Delta REV_{j,t}}{A_{j,t-1}}\right) + \alpha_2 \left(\frac{PPE_{j,t}}{A_{j,t-1}}\right) + \varepsilon_{j,t} \quad (3\text{-}9)$$

$$j \in estimation\ sample$$

4. Empirical Study and Design

4.1. Empirical Analysis Period

According to regulatory requirements, GEM apply to China Securities Regulatory Commission for listing by using reporting form in 3 years or 1 period of three years (reporting period). Meanwhile, the disclosure principle of the annual report cannot be later than next year April 30th. Therefore, some information have included in this context, financial data during 2006 to 2011 while company listing on 2009, financial data during 2007 to 2011 while company listing on 2010, and financial data during 2008 to 2011 while company listing on 2011.

As current situation of listing and information of listing companies, the empirical period includes two years before sample companies IPO, one year before and after IPO. For the convenience of research, the text assumes that IPO period is at the beginning, and figure out the years after listing. According to study purpose and hypothesis, the empirical study of context focus on year-2, -1, 0 and 1, as the result, the context verified that listing company IPO and had earnings management listing or not.

4.2. Sample Descriptive Data

Chart 4-1. The number of listed companies IPO in the GEM in different years.

Year	Listing Particulars Time		Raised funds reflected in balance sheet	
	Amount	Proportion(%)	Amount	Proportion(%)
2009	50	17.54	42	14.95
2010	113	39.65	116	41.28
2011	122	42.81	123	43.77
Total	285	100	281	100

PS: Samples in this paper use raised funds reflected in balance sheet in the end of term to divide listing year.

The study samples of this text were picked from listing companies of Shenzhen stock exchange. Until the end of 2011, there are 285 listing companies on GEM (Listing time accord to announcements)

Chart 4-1 reported the number of listed companies IPO in the GEM in different years. From the stock code 300283, they didn't report raised fund on balance sheet, if study group didn't count information of balance sheet, the sample of listing companies should be 281.

Chart 4-2 demonstrated the size and distribution of sample firms' assets. Because the listing companies IPO in the different time, it is not accurate to compare end of period assets in the same year, and this context calculated total assets of listing companies before IPO at GEM. In 281 samples, 0.2~0.3 billion companies are the most, there are 82 companies and 29.18% about total samples; there are 82 companies about 0.1~0.2 billion assets, about 25.98% in total; 82.56% companies are under 0.5 billion assets, there are only a few companies above 1 billion, only 2.14%; and 1.42% companies have assets under 0.1 billion. The conclusions are: 1. Listing companies didn't have many assets before came to market at GEM. 2. The size of assets is comparatively centralized.

Chart 4-2. The size and distribution of sample firms' assets.

Asset Size(¥)	Amount of firms	Proportion (%)	Frequency number	Frequency rate(%)
0~0.1 billion	4	1.42	4	1.42
0.1~0.2 billion	73	25.98	77	27.40
0.2~0.3 billion	82	29.18	159	56.58
0.3~0.4 billion	44	15.66	203	72.24
0.4~0.5 billion	29	10.32	232	82.56
0.5~0.6 billion	19	6.76	251	89.32
0.6~0.7 billion	12	4.27	263	93.59
0.7~0.8 billion	4	1.42	267	95.02
0.8~0.9 billion	5	1.78	272	96.80
0.9~1 billion	3	1.07	275	97.86
>1 billion	6	2.14	281	100.00
Total	281	100.00		

Graph 4-1 reported the number of the first earning ratio in different assessment districts. Because of "Three High", according to statistic, the main board's earning ratio are 53 times, 59 times and 47 times in recent three years, but the earning ratio of GEM are 64 times, 71 times and 51 times, compare to each other, GEM is higher obviously. At the same time, context compared price earnings ratio with bank ratio. Currently, Chinese deposit rate is 3.50%, according to price earning ratio formulation: 100/3.50=28.57 times. Therefore, the text has three assessment districts, they are ideal assessment district (lower than 28.57 times), main board's assessment district (28.57~59 times), overestimate assessment district (higher than 59 times). There are more than 141 listing companies at GEM that they are overestimate assessment district, and 132 listing companies at main board district, overall, GEM had a very high starting price earning ratio. Study group think that listing companies made earning management because listing companies need high stock price.
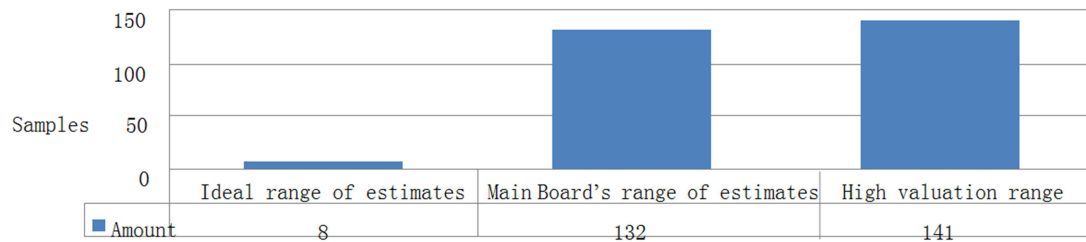
Graph 4-1. The number of the first earning ratio in different assessment districts.

Chart 4-3 showed the different industrial distribution. China Securities Regulatory Commission gave explicit directions to listing companies IPO in GEM, support strategic emerging industries development, so industrial distribution of listing companies became meaningful in GEM. The character can be below from the graph: (1) industrial distribution is not widely, there are 281 companies in 9 industries. But real estate, financial insurance, electric power companies and public services have no sample enterprises, the result is about the growth and innovation of industrial distribution in GEM, and also it can be the explicit direction during listing companies IPO in GEM. (2) Manufacture are the most, there are 189 manufactures, about 67.26% in total sample companies, compare to American NASDAQ, Chinese GEM represents the character of China—manufacturing industry. Inside, SITC7, C5 electricity, C4 plastic petrochemical industries are in the front, they are 29.18%, 12.46%, 11.03%, they reflected the strategic emerging industries development. (3) IT also has many sample companies, it's about 18.86% of total samples, and this is much higher than main board. Compare to manufacturing industries, these companies have more probabilities to make earnings management.

Chart 4-3. The different industrial distribution.

Industry	Amount	Proportion (%)
A Animal husbandry and fishery	6	2.14
B Mining	4	1.42
C0 Food and beverage	3	1.07
C3 Paper printing	2	0.71
C4 Petrochemical and plastics	31	11.03
C5 Electronic	35	12.46
C6 Metal and non-metal	10	3.56
C7 Mechanical equipment	82	29.18
C8 Medical biological	23	8.19
C9 Other manufacturing	3	1.07
E Building	2	0.71
F Transportation and storage	2	0.71
G Information technology	53	18.86
H Wholesale and retail	2	0.71
K Social service	14	4.98
L Media	9	3.20
Total	281	100.00

5. Empirical Test and Result Analysis

5.1. Empirical Test and Analysis Earnings Management Before and After Ipo

The text estimate regression equation of the total and coefficient (3-3) by using SPSS 17.0 regression equation software, to get total and factorial estimates. As chart 5-1 showing, from significance, sig. (most of the sig. is smaller than 0.005), totality of model with an obvious significant standard. During the testing of coefficient, average estimating coefficient of $\frac{\Delta REV_{i,t}}{A_{i,t-1}}$ is greater than 0, total accrued profit has positive correlation with gross profit; estimating coefficient average of $\frac{PPE_{i,t}}{A_{i,t-1}}$ is less than 0, it told that total accrued profit has negative correlation with fixed assets, it is about the truth. However, another truth is that regression coefficient is too lower and it means that other factors might affect total accrued profit of listing companies at GEM.

Chart 5-1. The regression equation of the total and factorial test.

Time	2008	2009	2010	2011
Sample size	221	281	281	281
R^2	0.22	0.081	0.065	0.215
F (sig)	20.349 (0.000)	8.168 (0.000)	6.430 (0.000)	25.337 (0.000)
ΔREVi,t/Ai,t-1	0.091	0.037	0.093	0.26
T (sig)	6.793 (0.000)	1.438 (0.151)	3.556 (0.000)	7.126 (0.000)
PPEi,t/Ai,t-1	-0.223	-0.18	-0.135	-0.047
T (sig)	-3.599 (0.000)	-4.205 (0.000)	-2.942 (0.004)	-0.982 (0.327)

PS: The lack of 2008's sample because it's not necessary to disclose 2007's information.

According to samples of regression result in 2008, 2009, 2010 and 2011, the text calculated that the DA (discretionary accruals) of listing companies in GEM in different years, it is to figure out standard of earning management. The context also used relative years to judge earnings management around listing companies IPO in GEM, therefore DA data were divided by following relatively years, the method can be seen in part 4.

Chart 5-2 reported earnings management in relative year -2, -1, 0 and 1. The average number of (DA) should be 0.0152 and 0.0033 in relative year -2 and -1, the trend of this report could be a big earnings management, but it had no difference with 0, this means that earnings management is not obvious before listed two years. Similarly, the averages of listing companies DA earnings management are 0.0643 and -0.0202 in relative year 0 and 1, and it is obvious different from 0, this means that listing companies IPO had earnings management at that time, after one year, listing companies decrease adjusted earnings management. The hypothesis one reflected the truth of earnings management after listing companies IPO.

Chart 5-2. *The level of listed companies' earnings management in the GEM.*

Relative year	Sample size	Average value	T-test	P-value
-2	281	0.0152	1.521	0.129
-1	281	0.0033	0.394	0.694
0	281	0.0643**	6.728	0.000
1	159	-0.0202**	-3.348	0.001

PS: **represents correlation is significant at 0.01 level (two-tailed test).

5.2. Testing and Analysis of Offering Price and Earnings Management Level

The assumption No.2 of this paper put forward that the motivation of earnings management in the process of IPO is to gain high offering price, which needs to analyze the relevance between initial offering prices and the level of earnings management.

According to current offering PE ratio (price earning ratio) confirm process, the sponsor proposes feasible range of PE on the basis of publishers' materials and trade PE in the market, then the CSRC issued IEC makes consideration in different situation and provides guidance. This leads to publishers hard to decide offering PE, as change offering PE is too high a price to pay.

Chart 5-3. *Correlation between basis EPS (earnings per share) and IPO price in the year of IPO.*

		Basis EPS	Offering Price
Basis EPS	Pearson correlation coefficient	1	.688**
	Significance (two-tailed test)		.000
	N	281	281
Offering Price	Pearson correlation coefficient	.688**	1
	Significance (two-tailed test)	.000	
	N	281	281

PS: **represents correlation is significant at 0.01 level (two-tailed test).

The chart 5-3 represents correlation between basis EPS (earnings per share) and IPO price in the year of issuance. Pearson's correlation coefficient of basis EPS and IPO price is 0.688, and the correlation is significant at 0.01 level (two-tailed test). It illustrates the scientificity of our theoretical deduction, which is that IPO price of listed companies in the GEM is greatly influenced by the EPS in the year of issue. It's necessary to note that predicted EPS in the year of issue used in the issuance pricing, while management layer of firms in the GEM try hard to maintain reputation and sponsors accomplish the duty of marketing supervising, so predicted EPS is in accordance with actual EPS in the year of issue.

Stockholders' meeting of publishers made decisions about types and amount of offering stocks, so, if enterprises want to raise offering price, they might gloss over reports by earning management to improve profit, as to increase numerator in formula 3-8.This paper estimates assumption No.2 by verifying the correlation between listed companies' levels of earnings management in the GEM in current year and IPO price.

Chart 5-4 reports the correlation between samples' levels of earnings management in the GEM in current year and IPO price. Correlation coefficient of earnings management level and IPO price is 0.141, and a correlation is significant at 0.05 level (two-tailed test).This proves assumption No.2, which illustrates one of the motivations of earnings management is the high initial offering price.

Chart 5-4. *Correlation between samples' earnings management level and IPO price in the year of issuance*

		The level of earnings management （DA）	Offering Price
The level of earnings management （DA）	Pearson correlation coefficient	1	.141*
	Significance (two-tailed test)		.000
	N	281	281
Offering Price	Pearson correlation coefficient	.141*	1
	Significance (two-tailed test)	.000	
	N	281	281

PS: ** represents correlation is significant at 0.05 level (two-tailed test)

5.3. Testing and Analysis of the Level of Earnings Management in Different Industries

In this paper, samples of listed companies who belong to manufacturing industry and those who don't, substituted into equation 3-9, and then calculate discretionary accruals (DA) of manufacturing industry and non-manufacturing industry's earnings management level. This paper judges if earnings management level is different in different industries.

Chart 5-5 descriptively analyzes samples in relative annual. In relative year -2, -1, and 1, there is little difference between average DA values and median, this represents that there is no significant difference between the levels of earnings management in those different industries during these years. In relative year 0, the average and median of DA of manufacturing industries are 5% and 4%, while which of non-manufacturing industries are 8% and 9%. This represents the level of earnings management of manufacturing industries is higher than that of non-manufacturing industries in the year of issuance. As we can see from standard deviation, in each relative year, values of which in manufacturing industries is lower than that in non-manufacturing industries, this represents the level of earnings management in manufacturing industries is more centralized than that in non-manufacturing industries. Observe from kurtosis values, they are exceed 3 in relative year -2, -1, non-manufacturing industries distribute in high kurtosis, while manufacturing industries distribute in low kurtosis. Observe from skewness, most values are greater than 0 (distribute in right-skewed), which means listed companies have the tendency to manipulate profits higher than actual profits. In relative year 0, non-manufacturing industries distribute in left-skewed, which means they have the tendency

to manipulate profits lower than actual profits.

The DA values of non-manufacturing industries are higher than manufacturing industries in the year of issuance, which approves the Hypothesis Three, the level of non-manufacturing companies' earnings management is higher than manufacturing companies' earnings management

in GEM. Apparently, the level of manufacturing and non-manufacturing industries earnings management is close. The reason is that the method to separate manufacturing and non-manufacturing industries is affected by outlier.

Chart 5-5. Descriptive analysis about samples in relative annual.

	Relative year -2		Relative year -1		Relative year 0		Relative year 1	
	Manu-fact uring industries	Non-manufac turing industries	Manu-fact uring industries	Non-manufac turing industries	Manu-facturin g industries	Non-manufac turing industries	Manu-facturin g industries	Non-manu-fac turing industries
Sample size	188	93	188	93	188	93	106	52
Average	0.00	(0.00)	(0.01)	(0.00)	0.05	0.08	(0.02)	(0.02)
Median	(0.01)	(0.02)	(0.01)	(0.01)	0.04	0.09	(0.04)	(0.03)
Standard deviation	0.15	0.18	0.12	0.17	0.14	0.18	0.07	0.09
Kurtosis	2.88	3.36	2.47	11.67	2.57	1.13	3.07	(0.32)
Skewness	0.83	(0.10)	0.49	1.78	1.08	0.14	1.16	0.22

PS: Numbers in brackets are minus.

6. Conclusions and Suggestions

Chinese GEM includes business achievement, publishing requirement of industrial guide and restrict examination. The restriction of policy induced that IPO companies made earnings management with legality and hidden. Meanwhile, companies made earnings management also for IPO successfully and high stock price.

This context used cross section data that based on Jones model, from the point of discretionary to measure the standard of earnings management, and confirmed three hypothesis:

1. View from the result of empirical study, companies made earnings management by increasing profits in the year of IPO, after one year, companies made earnings management again by decreasing profits. Enterprises which would like to be listed are inspected strictly by issuance examination regulators during issuance examination will. So they whitewash their profits by earnings management, and gloss over their predicted profits. Regulation stipulates that if publisher has given predicted profits but actual profits couldn't live up to 80% of it, legal representative will be punished. But those enterprises which would like to be listed escape supervision punishment by manipulating 6.43% of the beginning assets, and after one year, manipulating profits 2.02% lower than actual profits is just so 'clever'.

2. Another motivation of earnings management is the high initial offering price. During the price enquiry, prettified performance attracts more investors, and sponsors' reports can be more convinced. The weak correlation between them is realistic on account of stock pricing's complex process. It's affected by many factors, including the time, etc. Except that, listed companies' financial reports will be inspected by accounting firms and the issuance examination commission, so, the space of listed companies' conducting earnings management is limited.

3. This paper discusses the difference of earnings management between different industries, which is the level of earnings management of those listed companies who belong to manufacturing industry is less than that of those listed companies who don't belong to manufacturing industry in the year of issuance. This year, China carried out PE ratio (price earning ratio) on pricing mechanism. The alternative are not only the companies choosed by sponsors, but also companies which would like to be listed. This is a big progress. However, these companies in different industries have different extent of whitewash, they might do over-propaganda, too, which is also need to pay attention.

According to the conclusion in this paper, there are some policies and suggestions:

First, modify issue terms on the GEM, cancel the requirement of enterprises' profits, especially innovative enterprises' profits requirement. This is beneficial to issue system's construction which focused on information disclosure, and can weaken regulators' judgment about listed companies' profitability. The issuance examination commission should focus on temporal financial data, and response to publishers' predicted profits in the long run. Once find changes in certain listed company's future performance, the commission ought to investigate relative material during the process of issuance, control whitewashing behavior and aggravate punishment. Nowadays, China lack investigation standards, it could use discretionary accruals as a kind of standard.

Second, establish responding mechanism combining issue price and performance in secondary stock market to control "Three High" phenomenon in the process of issuance, urge new issued stock to reflect companies' real value, and coordinate primary market and secondary market in solid development. If certain company's PE ratio higher than the average, supervision agencies need to follow it's performance in secondary market, examine issue materials when perform bad, and remind investors of relative risks. In the meantime, regulators should improve price enquiry mechanism, avoid

over-high price occupying other resources in the GEM. Super raise funds will leads to capitals wash away or even waste, which is bad for improvements in capital market.

Last but not the least, enlarge the coverage of GEM, put GEM delist mechanism into practice. Listing is market oriented behavior of demand side of fund and supply side of fund. So, providing diverse listed companies is respecting the market. Over- stressed in certification will increase earnings management behaviors and is harmful to the reality of information and investments. China should put delist mechanism into practice and protect natural competition in the GEM, thus can form Chinese GEM style.

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