

# The Audit Opinion of Earnings Management in Listed Companies of China

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**Abstract:** The paper testes the relationship between audit opinions and financial sensitive zones and accounts on the basis of the data of Ashare companies in China. The author finds that when ROE of listed companies is in the small-profit zone or in the large-loss zone, the probabilities that they get modified audit opinions increase. But the right-offering zone, accrual accounts and accounts below the line have no significant effects on the modified audit opinions. Besides, the author also finds that the ratio of accounts receivable to asset, debt ratio, previous year's audit opinion and change of CPA firms have significant positive effects on the modified audit opinions, while the ratio of major business revenue and size of companies have no notable effects. Some other factors such as cash ratio, age of the listing and CPA firm ranking have no consistent and continuous effects.

**Key words:** earnings management; financial sensitive zones; financial sensitive accounts; audit opinion

Earnings management phenomena are getting more and more attention from many kinds of people in our society. Most domestic scholars focused their researches on the fields that whether and when the earnings management phenomena would occur. The uniqueness of this paper versus other papers about earnings management is that it tries to study the relationship between audit opinions and financial sensitive zones and accounts. Financial sensitive zones and accounts refer to the financial indexes' marginal zones and accounts, which managers are accustomed to trying to manipulate financial statements illegally. Normally, such manipulation activities include adopting accounting policies illegally, making accounting estimates and disclosing financial statements irregularly. Consequently, the listed companies involving these items get modified audit opinions more frequently than other companies. To disclose the intrinsic regular features and provide references for the CPAs and supervisors, this paper will empirically test the relationship between audit opinions and financial sensitive zones and accounts on the basis of the financial statements and audit reports of A-share companies in China.

## 1. Literature Review

Among the empirical researched related to earnings management of listed companies in China, the following scholars listed some financial sensitive zones and accounts as earnings management variables, and studied their effects on modified audit opinions.

Li, Huang and Wang (2001)<sup>1</sup> discussed the relationship between earnings management variables, change of CPA firms and 'non-clear' audit opinions on the basis of listed companies in 1999-2000. They found that accounts receivable, inventory and non-core earnings items had no significant effects on modified audit opinions.

Xia and Yang (2002)<sup>2</sup> empirically studied the inductive relationship between audit opinions and supervision systems (special treatment, particular transfer and rights-offering system) using the data from China's listed companies in 2002. They concluded that the companies which had marginal ROE didn't have more probabilities

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<sup>1</sup> Li Dongping, Huang Delin & Wang Zhenlin. "Non-clear" Audit Opinions, Earnings Management and Change of CPA Firms, Accounting Research, 2001 (6).

<sup>2</sup> Xia Lijun, Yang Haibin. CPAs' Reflection on the Listed Companies' Earnings Management, Auditing Research, 2002 (4).

to get modified audit opinions than others.

Chen and Chang (2003)<sup>3</sup> tested the relationship between earnings manipulation, supervision systems and independence of CPAs using the data from A-share companies in 1998-2001. They found that when listed companies barely got even or made large losses, the probabilities that they got modified audit opinions increased. However, when ROE barely met the criterion to rights offering, the probabilities that listed companies got modified opinions showed no difference.

## 2. Research Hypothesis

The delisting system in China is based on whether the accounting profit is greater than zero, and the right-offering system is based on whether ROE is in the rights-offering zone: (1) In 1994-1995, "The company has been continuously profitable for the last three years; the average after-tax rate of return on equity is greater than 10% in the last three years" (Security [1994] 131); (2) In 1996-1998, "The company's after-tax rate of return on equity is greater than 10% in the last three years" (Security [1996] 17); (3) In 1999-2000, "The average rate of return on equity is greater than 10% in the last three fiscal years, and every year's return on equity is not less than 6%" (Security [1999] 12); (4) After 2000, "the weighted average rate of return on equity is not less than 6% in the last three fiscal years" (Security [2001] 43).

Some listed companies often satisfy these supervision systems in order to not be specially treated, particularly transferred or to meet the rights-offering requirement. When the profit can't fulfill the required criteria, these companies will manipulate financial indexes and accounting accounts to increase the rate of return on equity (ROE). In the previous works, Chen, Xiao and Guo (2000)<sup>4</sup> found that the distribution of ROE obviously showed the "10%" phenomenon in the descriptive statistic and regression analysis of the data of listed companies in 1994-1997. Haw, Qi, Wu and Zhang (1998)<sup>5</sup> also analyzed the data of listed companies in 1994-1997, and found that the percent of the companies with marginal ROE increased to two times after the related rights-offering system had been formulated. They tested that these companies sometimes manipulated the accounts below the line and accrual accounts to meet the rights-offering requirement. Lu (2002)<sup>6</sup> made a positive analysis from the earnings management of A-share companies in China by the distribution of earnings after management, and they found that listed companies would keep ROE in the zones which slightly greater than 0, 6%, or 10% in order to avoid losses or meet rights-offering line.

According to researches above, combined with the ST, PT and right-offering systems, this paper holds that the financial sensitive zones of listed companies in China mostly are in small-profit zone, large-loss zone and right-offering zone. In light of generally accepted in China, when CPAs find any particular irregularities which the listed companies refuse to adjust or disclose, they should give modified audit opinions. Our formal hypotheses are as follows.

H<sub>1</sub>: Modified audit opinions are positively related to whether listed company's ROE is in the small-profit zone or not.

H<sub>2</sub>: Modified audit opinions are positively related to whether listed company's ROE is in the large-loss zone or not.

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<sup>3</sup> Chen Xiao, Chang Rui. *Earnings Manipulation, Supervision Systems and Independence of CPAs*, Master's Degree Dissertation, School of Economic & Management in Tsinghua University, 2003.

<sup>4</sup> Chen Xiaoyue, Xiao Xin & Guo Xiaoyan. *Preemptive Rights and Earnings Manipulation in listed companies*, Economic Research, 2000 (1).

<sup>5</sup> Haw-In-Mu, Qi., Daqing, Wu.Woody and Weiguo Zhang. *Earnings Management of Listed Firms in Response to Security Regulations in China's Emerging Capital Market*, Working Paper, Chinese University of Hong Kong, 1998.

<sup>6</sup> Lu Yujian. *Study on listed companies' earnings management from distributions of ROE and ROA in China*, Inquiry into Economic Problems, 2002 (3).

H<sub>3</sub>: Modified audit opinions are positively related to whether listed company's ROE is in the right-offering zone or not.

According to the research of Haw, Qi, Wu and Zhang (1998), the financial sensitive accounts are mainly referred to accrual accounts and accounts below the line. (1) Regarding the accrual accounts, in the accrual basis accounting, net profit consists of cash earnings and accrual profit, and accrual profit can be adjusted by choosing or changing the accounting policies. In practice, it's normal to change accrual profit through accounts receivable and inventory. Therefore, this paper simulates the manipulation size of operating profit by accrual accounts' difference which occurs because of accounts receivable and inventory. (2) Accounts below the line, which are referred to the accounts under the operating profit in income statement, are non-core earnings. It's also normal to manipulate profit by the accounts below the line, such as investment, joint management, asset replacement, financial restructuring, government subsidy, and so on. Focusing on these financial sensitive accounts, the formal hypotheses are as follows:

H<sub>4</sub>: Modified audit opinions are positively related to the rate of change of accrual accounts.

H<sub>5</sub>: Modified audit opinions are positively related to the rate of change of accounts below the line.

### 3. Sample and Data

The sample in this paper consists of A-share companies in Shanghai and Shenzhen Stock Exchanges from 2000 to 2002. Listed companies' financial data and audit opinions are from Genius Securities Information System and the website for Chinese Listed Companies ([www.cnlist.com](http://www.cnlist.com)), and they have been arranged one by one. Meanwhile, in order to ensure the veracity, this paper has checked the statistic data of audit opinions with the data promulgated by China's Securities Regulatory Commission. The CPA firm ranking is gained from *Who Audit China's Stock Market--Analysis of Auditing Market* by Chief Accountant Office of SEC.

The sample is full. That is to say, if there is no short of financial data, all listed companies which have promulgated their financial statements can be regarded as the regression samples. Because the financial data in insolvency companies' statements isn't full, this paper has eliminated 58 companies (15 companies in 2000, 20 companies in 2001, and 23 companies in 2002). Besides, 10 financial companies have also been eliminated as their data isn't comparable to others' data (2 companies in 2000, 3 companies in 2001, and 5 companies in 2002). Thus, the final sample is composed of 3327 observations. After picking up the audit opinions, we analyze the sample's structure according to the years and the opinion types. The results are as follows:

**Table 1 The Structure of Sample's Audit Opinions in 2000-2002**

		Standard unqualified opinion	Modified audit opinions					Total of A Share companies	
			Standard with explanatory	Qualified opinion		Disclaimer of opinions	Adverse opinion		Total
				Qualified	Qualified with explanatory				
2000	Num Per	886 (84.95)	102 (9.78)	17 (1.63)	34 (3.26)	4 (0.38)	0 (0)	157 (15.05)	1043 (100)
2001	Num Per	978 (87.87)	83 (7.46)	17 (1.53)	22 (1.98)	13 (1.17)	0 (0)	135 (12.13)	1113 (100)
2002	Num Per	1034 (88.30)	92 (7.86)	16 (1.37)	21 (1.79)	8 (0.68)	0 (0)	137 (11.70)	1171 (100)
Total	Num Per	2898 (87.11)	277 (8.33)	50 (1.50)	77 (2.31)	25 (0.75)	0 (0)	429 (12.89)	3327 (100)

Note: The percent numbers are in the bracket. They are the percentage of this kind of audit opinions to all kinds of opinions in this year.

## 4. Variable and Model

According to the research hypotheses described above, this paper chiefly chooses 7 independent variables to represent financial sensitive zones and accounts, 6 control variables to represent financial features of companies, and 4 control variables to represent auditors' features.

### 4.1 Variables that Represent Financial Sensitive Zones and Accounts

According to the above context, the financial sensitive zones of China's listed companies mainly consist of small-profit zone, large-loss zone and right-offering zone. When ROE is in the corresponding zones, the variable is equal to 1, or 0. Based on every year's supervision systems, the related variables are set as follows: (1) ROE, listed company's rate of return on equity; (2) De-list, dummy variable, if ROE is in the small-profit zone (0, 1%), the variable is equal to 1, or 0; (3) Loss, dummy variable, if ROE is in the large-loss zone (-8, -10%), the variable is equal to 1, or 0; (4) De-right, dummy variable, if ROE is in the right-offering zone (in 2000, ROE is in the zone [6%,7%] and the average ROE in the last three years is greater than 10%, or the average ROE in the last three years is in the zone [10%,11%] and ROE is greater than 6% in this year; in 2001 and 2002, the average ROE in the last three years is in the zone [6%,7%]), the variable is equal to 1, or 0.

Whereas listed companies often manipulates earnings by accrual accounts' differences and non-core profit, and the differences are caused by inventory and accounts receivable, this paper sets independent variables as follows: (1) AAR<sub>t</sub>, rate of change of accounts receivable,  $AAR_t = (AR_t - AR_{t-1}) / REV_t$ , where AR<sub>t</sub>, AR<sub>t-1</sub> and REV<sub>t</sub> respectively refer to accounts receivable balance in the end of term t, term t-1 and major business revenue in term t; (2) AINV<sub>t</sub>, rate of change of inventory,  $AINV_t = (INV_t - INV_{t-1}) / REV_t$ , where INV<sub>t</sub> and INV<sub>t-1</sub> respectively refer to inventory balance in the end of term t and term t-1; (3) NCR<sub>t</sub>, rate of non-core revenue,  $NCR_t = \text{non-core revenue among term } t / \text{equity in the end of term } t$ , where non-core revenue = non-operating net revenue + investment income + subsidy income.

### 4.2 Variables that Represent Financial Features

When a company's financial status is getting worse, there are more and more problems caused by financial sensitive zones and accounts, and the probabilities that the companies get modified opinion increase. Therefore, the control variables that represent financial features are chosen as follows: (1) CR, cash ratio; (2) DR, debt ratio; (3) ARR, rate of net receivable to the asset, where net receivable = accounts receivable + other receivables - other debtors; (4) OIR, rate of major business revenue to total revenue, where total revenue = major business revenue + non-operating revenue + investment income + subsidy income; (5) SIZE, size of the company, nature logarithm of total asset (UNIT: RMB 10000); (6) AGE, the company's age of listing.

### 4.3 Variables that Represent Auditors' Features

The size and reputation of CPA firm, whether CPAs are changed in the near future and the audit opinion in previous year are also related to audit opinions to some extent. The control variables related to CPA are as follows: (1) TOP10, dummy variable, if the CPA firm is ranked top 10 in the report period's auditing market, the variable is equal to 1, or 0; (2) AUDCHG, dummy variable, if in the report period the CPA firm has been changed, the variable is equal to 1, or 0; (3) PREMOD, dummy variable, if the previous year's audit opinion is unqualified opinion with an explanatory paragraph, the variable is equal to 1, or 0; (4) PREQUA, dummy variable, if the previous year's audit opinion is qualified opinion, disclaimer of opinion or adverse opinion, the variable is equal to 1, or 0.

As the independent variable (OP) is a binary variable, and there are both dummy variables and continuous variables in the explanatory variables, the logistic regression model is adopted in this paper.

$$\text{Pr ob}(OP) = \frac{1}{1 + e^{-z}}$$

Where independent variable (OP) is referred to audit opinion, and if it is modified opinion, the variable is equal to 1, or 0. Z is a linear combination of the explanatory variables and the control variables.

$$Z = \mathbf{b}_0 + \mathbf{b}_1ROE + \mathbf{b}_2De - list + \mathbf{b}_3Loss + \mathbf{b}_4De - right + \mathbf{b}_5AAR_t + \mathbf{b}_6AINV_t + \mathbf{b}_7NCR_t + \mathbf{b}_8CR + \mathbf{b}_9DR + \mathbf{b}_{10}ARR + \mathbf{b}_{11}OIR + \mathbf{b}_{12}SIZE + \mathbf{b}_{13}AGE + \mathbf{b}_{14}TOP10 + \mathbf{b}_{15}AUDCHG + \mathbf{b}_{16}PREMOD + \mathbf{b}_{17}PREQUA$$

## 5. Research Result

### 5.1 Full Sample Research Result

#### 5.1.1 Uni-variable Analysis Result

Firstly, the audit opinions are divided into standard unqualified opinion group and modified opinion group. Then, uni-variable comparison is processed, and the results are reported in Table 2. We find that: (1) ROE, CR and SIZE of modified opinion samples are notably lower than those of standard unqualified opinion samples, but DR, ARR and AGE are significantly greater than those of standard unqualified opinion samples, and they are all at 1% significant level. The evidence shows that CPAs will consider these factors when expressing audit opinions. (2) OIR of modified opinion samples is notably greater than that of standard qualified opinion samples, but  $AAR_t$ ,  $AINV_t$  and  $NCR_t$  are significantly lower. These results aren't corresponding with  $H_4$  and  $H_5$ , and show that audit opinions don't fully reflect irregularities caused by accrual accounts and accounts below the line, except that the sensitive accounts don't involve particular irregularities. (3) Chi-Square test shows that the companies whose ROEs are in the small-profit zone or the lager-loss zone or which are given modified opinions in the previous year have much more probabilities to be given modified opinions than expected. And the companies which have changed auditors also have much more probabilities to be given modified opinions than expected. It explains that the companies with these features are more frequent to be given modified opinions. On the contrary, the companies whose ROEs are in the rights-offering zone have less probabilities to be given modified opinions than expected, which isn't corresponding with  $H_1$ . The evidence shows that audit opinions don't fully reflect the irregularities existing in the rights-offering zone, except that the zone doesn't involve particular irregularities.

**Table 2 Uni-variable Test Results of the Full Sample in 2000-2002**

Part1 Uni-variable Test of Continuous Variables				
	Standard unqualified	Modified opinions	Mean difference	T-test
ROE	0.0523	-1.7184	1.7707	4.838***
$AAR_t$	-0.0063	-0.4990	0.4927	5.968***
$AINV_t$	0.0307	-0.2598	0.2905	4.030***
$NCR_t$	0.0121	-0.3937	0.4058	3.290***
CR	1.8583	1.6024	0.2559	2.538***
DR	0.4308	0.5783	-0.1475	-16.311***
ARR	0.1125	0.1679	-0.0554	-10.235***
OIR	0.9746	1.1240	-0.1494	-2.380***
SIZE	11.8313	11.5664	0.2649	5.769***
AGE	4.6311	5.5169	-0.8858	-6.387***
Part2 Chi-Square Test of Dummy Variables ( Expected Distribution is in the Bracket )				
	Number (variable=1)	Number of standard samples	Number of modified samples	Chi-Square(?2)
De-list	194	143(169)	51(25)	31.040***

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Loss	282	136(245.6)	146(36.4)	378.914***
De-right	319	298(278)	21(41)	11.195***
TOP10	782	682(681.2)	100(100.8)	0.007
AUDCHG	434	333(378)	101(56)	41.518***
PREMOD	251	121(218.6)	130(32.4)	337.581***
PREQUA	154	56(134.1)	98(19.9)	351.40***

Notes: \*\*\*, \*\*, \* means significant standard of 1%, 5%, 10% respectively.

### 5.1.2 Binary Logistic Regression Result

Uni-variable analysis can't post the interaction of all variables, so we should take binary logistic regression to the full sample. The results are presented in Table 3, where panel B is coefficient of logistic regression, Wald represents statistic of coefficient's significant test. In Table 3, we find that: (1) If ROE is in the small-profit zone or in the large-loss zone, it has significant positive effect on the probability that the company is given a modified opinion. So  $H_1$  and  $H_2$  are supported. (2) If ROE is in the rights-offering zone, it has no significant effect on the probability that the company is given a modified opinion. So  $H_3$  is denied. (3) Accrual accounts and accounts below the line don't have positive effects on the modified opinions, so  $H_4$  and  $H_5$  are denied. (4) DR, ARR, PREQUA and AUDCHG have notable effects on the modified opinions as expected. (5) SIZE, AGE, AUDCHG and OIR don't have significant effects on the modified opinions. (6) CR also has significant positive effect on the modified opinions and this result is different from the expectation.

**Table 3 Binary Logistic Regression Results of the Full Sample in 2000-2002**

Standard unqualified opinion VS Modified opinions (N = 2899 + 428)			
Independent Variable	Expected Symbol	B	Wald
ROE	?	-0.024	0.259
De-list	+	1.219	33.677***
Loss	+	1.694	81.258***
De-right	+	0.041	0.027
AAR <sub>t</sub>	+	-0.245	3.287*
AINV <sub>t</sub>	+	-0.004	0.003
NCR <sub>t</sub>	+	-0.502	3.628*
CR	-	0.081	7.071***
DR	+	2.522	33.552***
ARR	+	2.855	29.944***
OIR	-	0.228	1.203
SIZE	-	-0.104	1.890
AGE	+	-0.016	0.337
TOP10	+	0.034	0.048
AUDCHG	+	0.556	11.388***
PREMOD	+	2.265	182.822***
PREQUA	+	2.570	148.376***
Chi-square		846.844***	
R-square		0.419	
Correct Class (%)		90.6%	

Notes: \*\*\*, \*\*, \* means significant standard of 1%, 5%, 10% respectively.

After eliminating the insignificant variables in Table 3, binary logistic regression is processed again, and then the results are reported in Table 4. We can find that the regression results are totally corresponding with those in Table 3. In other words, the significant variables in Table 3 are still significant in Table 4.

**Table 4 Binary Logistic Regression Results of the Full Sample in 2000-2002 after Eliminating the Insignificant Variables**

Standard unqualified opinion VS Modified opinions ( N = 2899 + 428 )			
Independent Variable	Expected Symbol	B	Wald
De-list	+	1.201	33.527***
Loss	+	1.746	94.148***
AAR <sub>t</sub>	+	-0.260	5.097***
NCR <sub>t</sub>	+	-0.514	5.340**
CR	-	0.083	7.489**
DR	+	2.383	33.791***
ARR	+	2.973	33.607***
AUDCHG	+	0.537	10.694***
PREMOD	+	2.273	193.315***
PREQUA	+	2.587	153.557***
Chi-square			842.138***
R-square			0.417
Correct Class (%)			90.4%

Notes: \*\*\*, \*\*, \* means significant standard of 1%, 5%, 10% respectively.

## 5.2 Research results in different years

On the basis of the full sample's analysis, the following study tests respectively the different year's samples in 2000-2002 in order to observe whether the results are consistent in different years. We still adopt both uni-variable analysis and binary logistic regression method.

### 5.2.1 Uni-variable analysis results

The full sample in 2000-2002 is divided into standard unqualified opinion group and modified opinion group. Table 5 shows uni-variable analysis results in different years.

From Part 1 of Table 5, we find that: (1) For different years' samples, ROE, AAR<sub>t</sub> and NCR<sub>t</sub> of the companies which are given modified opinions are significantly lower than those of the companies with standard unqualified opinions; ARR, AGE and DR are significantly greater than those of the companies with standard unqualified opinions. The results are corresponding with those of the full sample, and prove that these variables respectively affect the probabilities to be given modified opinions. Besides, the effects are consistent and continuous in different years. (2) AINT<sub>t</sub>, CR and SIZE have significant differences in 2000 and 2002, which is similar with the full sample's result. But the difference isn't significant in 2001, despite the fact that the coefficient symbols are consistent. OIR is at 5% significant level in the full sample, insignificant in 2000 and has opposite symbol in 2001, while it becomes much significant in 2002. These variables' effects are non-consistent and non-continuous in different years, and this shows that the factors affecting audit opinions have different years' difference to some extent.

Part 2 in Table 5 is Chi-square test results of dummy variable in different years' samples. The results are as follows: (1) The companies whose ROE are in the lager-loss zone, which have changed auditors or which are given modified opinions in the previous year have much more probabilities to be given modified opinions than expected. TOP10 don't have significant effect in different years. These results are not only corresponding with those of the full sample but also consistent and continuous in different years. (2) De-list and De-right don't have significant effects in 2002. These variables are non-consistent with those in the full sample, which shows there are differences in different years.

Table 5 Uni-variable Test Results in Different Years

Part1 Mean Differences' T-test of Continuous Variables									
	2000		2001		2002				
	Mean difference	T-test	Mean difference	T-test	Mean difference	T-test			
ROE	3.8384	3.528***	0.5695	7.555***	0.6064	7.858***			
AAR <sub>t</sub>	0.7875	3.389***	0.2633	4.795***	0.3857	6.046***			
AINV <sub>t</sub>	0.5403	3.067***	0.1149	1.065	0.1785	2.720***			
NCR <sub>t</sub>	0.9274	2.524**	0.1339	4.547***	0.0822	4.811***			
CR	0.3862	2.798***	0.1797	1.334	0.2822	2.215**			
DR	-0.1381	-9.112***	-0.1715	-10.720***	-0.1350	-8.502***			
ARR	-0.1183	-11.338***	-0.1357	-12.670***	-0.1198	-11.219***			
OIR	-0.0041	-0.298	0.0424	2.184**	-0.5078	-2.762***			
SIZE	0.2799	3.819***	0.1516	1.871*	0.3361	4.015***			
AGE	-1.2465	-5.958***	-0.8457	-3.545***	-0.7304	-2.855***			
Part2 Chi-square Test of Dummy Variables									
	St.	Mod.	Chi-square	St.	Mod.	Chi-square	St.	Mod.	Chi-square
De-list	27 (41.6)	22 (7.4)	33.929***	50 (58.9)	17 (8.1)	11.026***	66 (68.9)	12 (9.1)	1.025
Loss	29 (57.8)	39 (10.2)	95.668***	48 (85.2)	49 (11.8)	134.103***	59 (103.3)	58 (13.7)	162.451***
De-right	130 (117.4)	8 (19.6)	9.971***	71 (65.9)	4 (9.1)	3.250*	97 (93.6)	9 (12.4)	1.057
TOP10	168 (167.3)	29 (29.7)	0.019	245 (251.3)	41 (34.7)	1.306	269 (264.0)	30 (35.0)	0.803
AUDCHG	82 (92.6)	27 (16.4)	8.065***	181 (203)	50 (28)	19.625***	70 (83.0)	24 (11.0)	17.410***
PREMOD	28 (62)	45 (10.9)	123.74***	55 (86.1)	43 (11.9)	92.679***	38 (70.6)	42 (9.4)	128.913***
PREQUA	21 (47.6)	35 (8.4)	99.098***	21 (46.6)	32 (6.4)	115.758***	14 (39.7)	31 (5.3)	142.468***

Notes: \*\*\*, \*\*, \* means significant standard of 1%, 5%, 10% respectively.

### 5.2.2 Logistic Regression Results in Different Years

According to uni-variable analysis, this paper find that there are differences in the test results of samples in different years, and these results are non-consistent with those of the full sample. In order to test the relationships between financial sensitive zones, accounts and audit opinions in different periods more effectively, we take logistic regression analysis for different years' samples. The results are presented in Table 6, and we find that: (1) The factors that have effects on modified opinions have differences in different years. It shows that in China it isn't mature enough to analyze problems with the combined samples of some years, and it's necessary to separately test every year's samples. But in three years' regression results, H<sub>1</sub>, H<sub>2</sub> are all supported, and H<sub>3</sub>, H<sub>4</sub>, H<sub>5</sub> are all denied. This result explains that China's CPAs can express modified opinions for irregularities of the companies whose ROEs are in the small-profit zone or in the large-loss zone, but can't express suitable audit opinions for irregularities caused by meeting the right-offering lines or by making use of accrual accounts and accounts below the line (except that listed companies don't involve these kinds of behaviors). (2) For control variables, the effects of ARR, PREMOD, PREQUA and DR are strongly consistent and continuous. AUDCHG has significant effect in 2001 and 2002, and it is also a significant factor to influence audit opinions. CR and TOP10 are significant only in one year, and AGE is significant in two years, so these factors affect auditors' professional



judgement to some degree only in particular years. While, the results of SIZE and OIR are consistent with those of the full sample, so these variables don't have significant effect on modified opinions. (3) Last but not least, CR is significant only in one year. OIR isn't significant in any year, and has opposite symbol compared with the expected symbol in two years. These results aren't corresponding with the hypothesis that the companies with modified opinions have low cash ratio and low ratio of major business revenue.

**Table 6 Binary Logistic Regression Results of Respective Year's Samples in 2000-2002**

Independent variable	Symbol	2000 (N = 887+156)		2001 (N = 978+135)		2002 (N = 1034+137)	
		B	Wald	B	Wald	B	Wald
Costant	?	-3.894	5.104***	-6.119	11.711***	-2.487	2.040
ROE	?	-0.045	0.131	0.041	0.070	-0.173	0.324
De-list	+	1.626	19.152***	1.167	9.271**	0.724	3.439*
Loss	+	0.922	5.117**	1.794	24.602***	1.735	26.784***
De-right	+	-0.078	0.035	-0.434	0.588	0.639	2.451
AAR <sub>T</sub>	+	-0.128	0.166	-0.175	0.585	-0.841	4.620**
AINV <sub>T</sub>	+	-0.118	0.181	0.206	1.686	-0.161	0.907
NCR <sub>T</sub>	+	-2.283	4.374**	-0.621	1.462	0.507	0.396
CR	-	-0.057	0.169	0.178	6.145**	0.044	0.260
DR	+	1.601	3.216*	3.360	16.812***	1.613	4.139**
ARR	+	4.813	33.092***	4.794	28.343***	2.133	5.843**
OIR	-	0.694	1.603	-0.462	0.360	0.249	0.345
SIZE	-	-0.121	0.758	0.086	0.406	-0.156	1.164
AGE	+	0.091	3.121*	0.100	3.520*	-0.052	1.168
TOP10	+	-0.313	1.048	0.575	4.353**	-0.016	0.003
AUDCHG	+	0.061	0.035	0.958	13.160***	0.578	2.817*
PREMOD	+	2.648	69.658***	2.032	44.880***	2.318	52.866***
PREQUA	+	2.262	41.096***	2.512	39.923***	2.605	39.591***
Chi-square		321.253***		324.695***		298.421***	
R-square		0.465		0.484		0.438	
Correct Class (%)		89.2%		91.8%		92%	

Notes: \*\*\*, \*\*, \* means significant standard of 1%, 5%, 10% respectively.

## 6. Study on the Regulation of Seasoned Equity Offering in 2002

Similar to rights offering, seasoned equity offering (SEO) is also an important financing way for the listed companies. So, equity-offering zone can also be supposed to be a financial sensitive zone. It's necessary to study the relationship between this zone and audit opinions. In China, there is not no limitation on the conditions of SEO until 2000, and then the limitations are as follows: (1) In 2001, the regulation is the same as that of rights offering (Security [2001] 43); (2) In 2002, it is adjusted as "The weighted average rate of return on equity is not less than 10% in the last three fiscal years, and the weighted average rate of return on equity is not less than 10% in the last year." (Security [2002] 55) So it is expected that the research results on equity-offering zone and right-offering zone should be corresponding. And then we just study on whether CPAs can disclose the earnings manipulation caused by SEO on the basis of samples in 2002. According to the policies in 2002, the test zone about earnings manipulation caused by SEO should be that the average ROE in the last three years is in the zone [10%, 11%] and ROE is greater than 10% in this year. The formal hypothesis is as follows.

H<sub>6</sub>: Modified audit opinions (unqualified opinions) are positively related to whether listed company's ROE is in the equity-offering zone or not.

This paper takes a full sample analysis on Ashare companies in 2002. As the study on SEO, only one variable which represents features of earnings manipulation is set, that is, whether ROE is in the equity-offering zone (issue). The independent variable and the control variables that represent financial features and auditors' features are the same as the above model. The definition of independent variable (Issue) is "If the average ROE in the last three years is in the zone [10%, 11%] and ROE is greater than 10% in this year, or ROE is in the zone [10%, 11%] and the average ROE in the last three years is greater than 10%, the variable is equal to 1, or 0."

For testing whether CPAs can express more serious audit opinions on irregularities caused in equity-offering zone, this paper not only analyzes the results of "standard unqualified opinions VS modified opinions" (Panel A), but also studies on the results of "unqualified opinions VS non- unqualified opinions" (Panel B). The results of binary logistic regression are presented in Table 7. We find that: equity-offering zone doesn't have effect on the probabilities that a company is given modified opinion and the coefficient is negative, so  $H_5$  is denied. It shows that CPAs can't disclose earnings manipulation caused by meeting the requirements of SEO, except that the listed companies don't involve this kind of behavior.

**Table 7 Binary Logistic Regression Results of SEOSamples in 2002**

Independent Variable	Symbol	A: standard VS modified ( N = 1034+137 )		B: unqualified VS non-unqualified ( N = 1126+45 )	
		B	Wald	B	Wald
Costant	?	-1.194	0.513	-7.227	8.173***
Issue	+	-1.286	1.416	-5.140	0.143
CR	-	0.041	0.198	-1.721	4.292**
DR	+	2.482	11.806***	-0.336	0.075
ARR	+	3.179	14.591***	3.238	7.370***
OIR	-	0.475	1.197	0.119	0.221
SIZE	-	-0.308	5.189**	0.278	2.011
AGE	+	-0.010	0.054	-0.005	0.004
TOP10	+	-0.236	0.743	-0.022	0.003
AUDCHG	+	0.376	1.259	0.410	0.750
PREMOD	+	2.281	60.290***	1.668	12.372***
PREQUA	+	2.708	49.964***	2.993	39.742***
Chi-square		250.115***		121.216***	
R-square		0.374		0.354	
Correct Class (%)		91.1%		96.5%	

Notes: \*\*\*, \*\*, \* means significant standard of 1%, 5%, 10% respectively.

## 7. Research Conclusion

Combined with the above uni-variable test, binary logistic regression analysis, results in different years and the study on the regulation on SEO, this paper has found relationships between financial sensitive zones, accounts and audit opinions. The relationships are as follows.

(1) When ROE of the companies is in the zone [0, 1%] or (-8, -10%), the probabilities that they get modified audit opinions increase. It shows that CPAs can disclose significant irregularities existing in small-profit zone and large-loss zone.

(2) When ROE of the companies is in the zone [6, 7%] or [10, 11%], the probabilities that they get modified audit opinions have no differences. It shows that although right-offering zone and equity-offering zone are thought as listed company's life line and often cause accounting information distortion, CPAs can't disclose significant irregularities caused by meeting the regulations of SEO or right offering, except that the listed companies don't

involve these kinds of behavior.

(3) Accrual accounts and accounts below the line don't have notable positive effects on modified opinions. It indicates that CPAs cannot fully disclose irregularities caused by making use of accrual accounts and accounts below the line, except that the listed companies don't involve these kinds of behavior.

(4) The ratio of accounts receivable to asset, previous year's audit opinion, debt ratio and change of CPA firms have significant positive effects on the modified opinions, even on more serious opinions. Size of company and ratio of major business revenue continuously have no notable effects in different years. Cash ratio is notable in full sample, but has opposite symbol compared with the expectation. Besides, its effects are non-consistent and non-continuous. The effects of age of listing and CPA firm ranking are non-consistent and non-continuous in different years, and are insignificant. It shows that CPAs haven't formed standards and traditions to express audit opinions steadily, and the auditing market is still in the dynamic developing period.

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(Edited by Heng Zhuang, Eric and Jianfeng He)