

Financial Restatement and the Information Content of Earnings

Zhai Huayun

School of Management, South-central University for Nationalities, Wuhan, P.R.China, 430074

Abstract. This paper takes the 452 listed firms as samples, which recorded financial restatement during 2008 to 2009, and inspects the quarter information content of earnings before and after the disclosure of financial restatement by using the one-period model of Wilson. Investigation indicates that the quarter information content of earnings declines following the disclosure of financial restatement. In particular, the ERC of quarter earnings before and after the disclosure exhibits a U-shaped pattern. However, the loss of information content following the disclosure is only temporary. The information content returns to prior level from the second to fourth quarter after the disclosure. In addition, investors make response to the temporary disclosure and the information content of earnings declines in succeeding four quarters following the disclosure of core earning errors correction.

Key words Disclosure of Financial Restatement, Core Earning Errors, The Information Content of Earnings

1. Introduction

China Securities Regulatory Commission (CSRC) issued "Notice on Further Improving Listed Corporations Financial Information Disclosure Quality" (referred to as "Notice" behind) on January 6th 2004, which require the listed firms to reflect the financial status and performance truly and fairly. The "Notice" pointed out: Companies with accounting errors have to disclose the corrected financial information promptly in form of significant item clinical reports, according to the related regulation by CSRC.

Research taken by Zhang Weiguo, Wang Xia^[1] and Li Yu^[2] indicated that accounting error of reporting higher earnings possess obvious earnings management incentive, companies with losses are more probably for such errors to take place, which account for that the recognition of "financial restatement" information bears considerable importance for investors to make use of financial statements and make decisions. But after Zeng Li's^[3] inspection of listed firms undertaking accounting errors correction in Shanghai A stock market during 2001, she discovered that around the disclosure of corporations' annual reports, there was no remarkable variance for exchanged stock volume and price, which showed no response made by investors to those "financial restatement" information. The questions this article would like to explain are: Under the circumstance mentioned above whether the earnings information content would decline; whether the response to earnings information made by investors is temporary, and whether there is any discrepancy of influence to earnings information content made by the core earnings errors correction information? The structure arrangement for this paper is as follows: The second part is literature review and investigation supposition, the third part tells investigation method, the fourth part is the result and analysis of regression and the final part includes conclusion and suggestion.

2. Literature Review

Whether the corporation earnings information content would change or not after financial restatement? Anderson and Yohn, Wu^[4-5], provided investigation proof in the first time, which showed that earnings

announcement reaction coefficient was negative in the first quarter after financial restatement; earnings reaction of market was negative for two quarters after financial restatement, all of these was investigation on short-term movement of earnings information content after financial restatement. Long-term movement research of that was carried on by Wilson^[6], who has utilized Collins and Salatka's one-period cross section model, and inspected the long-term variation of quarter earnings information content after financial restatement. He took 207 corporations went along finance information restatement during year 1997-2002 period for research, after inspecting the earnings announcements for 5 quarters before and after the financial restatements respectively, he deemed that the information content declined in the same period with financial restatements, however, the decline was just temporary. The earnings announcements information content showed a U-shape during the 5 quarters before and after the financial restatements, that is to say, from the second quarter after the restatements, reduction of information content was restoring gradually, which would already restore to the initial level until the forth quarter after financial restatements.

Scholars in our country have conducted massive empirical investigation on earnings announcements information content as well, but so few for quarter earnings information content, Xue Zuyun and Wu Donghui^[7] used the first quarter quarterly report in 2002 to examine whether the concentrated disclosure of public information would prevent investors to use the information effectively; Li Yuxia and Li Honggui^[8] proved that there are information content in the quarterly reports of our country by using third quarter reports in 2002 and 2003.

3. Investigation Method

3.1 Sample selection and data sourcing

As we implemented temporary disclosure of financial restatement from January, 2008 in our country, the investigation objects are listed corporations on A stock market which disclosed financial restatement during year 2008-2009 period. The quarter earnings data roots in the annual and the quarterly reports provided by the Shenzhen and Shanghai stock exchange, individual shares and the rate of market return originates from the Guotai'an database.

This paper collects listed corporations with "financial restatement" presented on the annual reports, according to information of annual reports provided by the Shenzhen and Shanghai stock exchange, 263 of them for 2008 and 221 for 2009, then following screening carried on: (1) eliminate finance and insurance corporations. (2) eliminate corporations delisted before January 1st, 2010. (3) eliminate corporations without data. After the above screening, sample corporations can be taken out: 250 of them for 2008 and 202 for 2009, finally we confirm that the number of usable sample listed corporations with "financial restatement" disclosure during year 2008-2009 period is 452.

3.2 Regression Model and Variable Definition

3.2.1 Regression Model

This paper uses one-period cross section model of Wilson^[6], the quarter before financial restatement disclosure is set to be $t=0$, the disclosure quarter and the succeeding quarters as $t \in \{1,2,3,4\}$, by using data of 5 quarters before and after the disclosure we examine the change period of earnings information content under financial restatement disclosure:

$$UR_{it} = \alpha_1 + \alpha_{2,t} \sum_{i=1}^4 QTR_{it} + \beta_1 UE_{it} + \beta_{2,t} \sum_{i=1}^4 [UE_{it} * QTR_{it}] + \varepsilon_{it} \quad (1)$$

In order to examine the influence made by significant accounting errors temporary disclosure, as well as that made by core earnings restatements, inspection of financial restatement disclosure and succeeding four quarters sub-samples should also be carried on by using following constructed model:

$$UR_{it} = \alpha_0 + \alpha_1 DIS_{it} + \alpha_2 CORE_{it} + \beta_0 UE_{it} + \beta_1 DIS_{it} * UE_{it} + \beta_2 CORE_{it} * UE_{it} + \varepsilon_{it} \quad (2)$$

3.2.2 Variable Definition

Variable definition in the above two models is as follows: ① UR_{it} is the unexpected rate of return of corporation i at the time of earnings disclosure in the quarter, t denoted as rate of accumulated exceeds return,

to be consistent with former similar research, we set the time window as (- 1,+1) three exchange days. Quarter earnings disclosure day is time 0, and if the disclosure day is non-exchange day, then the next exchange day will be time 0, the rate of market return uses the circulation market value weighted average; ②QTR_{it} represents that if corporation i's quarter earnings disclosure belongs to the quarter t, then QTR_{it} values 1, otherwise values 0; ③UE_{it} represents the unexpected earnings of corporation i at the quarter t, the concrete computation method is: Subtract the earnings per share of quarter t-1 from that of quarter t the earnings per share, then divided by the absolute value of earnings per share of quarter t-1, namely $UE_{it} = (EPS_{i,t} - EPS_{i,t-1}) / |EPS_{i,t-1}|$; ④DIS_{it} represents that if corporation i's financial restatement is temporary, values 1, otherwise, values 0; ⑤CORE_{it} represents that if corporation i's financial restatement belongs is core earnings correction, values 1, otherwise, values 0; ⑥UE_{it}*QTR_{it}、UE_{it}*DIS_{it} 和 UE_{it}*CORE_{it} respectively represent alternative items of unexpected earnings at the end of quarter and variable quarter, temporary disclosure, core earnings correction, the coefficients of which are mainly inspected in this paper. According to the above discussion, the three coefficients should be negative, namely the coefficient $\beta_{1, t}$ in the model (1) and the coefficients β_1 and β_2 in the model (2) should be less than 0.

4. Investigation Conclusion and Analysis

4.1 Descriptive Statistic

Table 1 describes the distribution of samples, among the 250 corporations in which financial restatement has taken place in 2008, 130 ones implemented temporary disclosure, accounted for 52%, and 100 corporations in 2009, accounted for 49.5% of 202. It can be seen that although the CSRC asked listed corporations to disclose corrected finance information in form of significant item clinical report following related regulation under circumstance of accounting errors, there were few of them disclose voluntarily, only accounted for 18.58% of total samples; Moreover, core earnings errors are financial restatement involved main operating income, main operating cost and operating expense, others are other accounting errors. The core earnings errors accounted for 24.4% of all correction in 2008, and 30.69% in 2009. The core earnings errors correction accounted for 29.2% in total samples. Obviously the core earnings errors are major part of financial restatement.

Table 1 Descriptive Statistic of Samples

Sample	Temporary Disclosure	Together Disclosure	Core Earnings Errors	Other Accounting Errors
2008	130(52%)	120(48%)	61(24.4%)	178(75.6%)
2009	100(49.5%)	102(50.5%)	62(30.69%)	142(69.31%)
Total	84(18.58%)	368(81.42%)	132(29.2%)	320(70.8%)

Table 2 are descriptive statistic of variables, rate of unexpected return UR and average and median of unexpected earnings UE are negative from total samples, which indicates that individual rate of return of corporations with financial restatement within 3 days of earnings announcement is lower than market rate of return, each quarter earnings are declining; Around the 5 quarters before and after financial restatement, UE is negative expect for the 2nd quarter, which indicates that in corporations with financial restatement earnings of each quarter is lower than the last one.

Table 2 Descriptive Statistic of Variables

	mean	median	max	min
UR ₀	-0.00398	-0.0026	0.2683	-0.3126
UE ₀	-0.00398	-0.0029	1.3862	-0.9009
UR ₁	-0.00728	-0.0073	0.1608	-0.1724
UE ₁	-0.09478	-0.005	0.8812	-5.4599
UR ₂	-0.00458	-0.0001	0.1745	-0.2714
UE ₂	0.07752	0.0071	3.2832	-0.5399
UR ₃	0.00502	0.004	0.2381	-0.1511

UE ₃	-0.01038	0.0021	0.4362	-0.8299
UR ₄	-0.00313	-0.001	0.2693	-0.1779
UE ₄	-0.01108	-0.0029	1.3862	-1.2369
UR	-0.00278	-0.0012	0.2693	-0.3126
UE	-0.00868	-0.0006	3.2832	-5.4599
DIS	0.20282	0	1	0
CORE	0.31092	0	1	0

4.2 Regression Result

Table 3 is the regression result of model (1), comprehensively reflecting the influence on earnings announcement information content of 5 quarters before and after financial restatement. From Table 3 we can see, UE reaction coefficient is obviously positive on level 0.01, QT_1*UE_1 , QT_2*UE_2 , QT_3*UE_3 and QT_4*UE_4 coefficients is remarkable on level 0.01, and QT_4*UE_4 coefficient is remarkable on level 0.05, besides, the 1st quarter to 4th quarter hereafter, influenced coefficient is increasing, which indicates financial restatement can obviously reduce earnings announcement information content, but the reduction will restore gradually in hereafter

Through Calculation, it can be seen that all coefficients before and after are obviously positive, which indicates that unexpected rate of return's response to unexpected earnings is obviously positive, so there are information content in quarter earnings announcement of our country; compared with the quarter before disclosure, the earnings reaction coefficient of the 1st quarter after is reduced from 0.1324 to 0.0471, but in the 2nd, 3rd and 4th quarter the coefficients is 0.0687, 0.0876, 0.0894 respectively, although these three quarters' are lower than the quarter before disclosure, they are increasing compared with the 1st quarter after.

Table 3 Regression Result of Model (1)

Variable	Coefficient	t-Statistic	Prob.
C	-0.0041	-1.2765	0.1954
UE	0.1324	5.5327	0
QT ₁	-0.0011	-0.2865	0.7863
QT ₁ *UE ₁	-0.0853	-3.9456	0.0001
QT ₂	-0.0032	-0.7726	0.5631
QT ₂ *UE ₂	-0.0637	-3.7868	0.0002
QT ₃	0.0092	2.3053	0.0154
QT ₃ *UE ₃	-0.0448	-1.5424	0.1361
QT ₄	0.001	0.6541	0.8325
QT ₄ *UE ₄	-0.043	-2.2531	0.0345
Adjusted R ²	5.89%		
F Value	10.25		

Table4 Regression Result of Model (2)

Variable	Coefficient	t-Statistic	Prob.
C	-0.00143	-0.78649	0.4317
UEIT	0.043153	5.596671	0
DIS	-0.00737	-2.06591	0.039
DIS*UE	-0.00946	-0.93124	0.3519
CORE	0.001878	0.601611	0.5475

CORE*UE -0.02031 -1.98656 0.0472

The model (2) is regression result of four quarter after financial restatement disclosure sub-sample, describing the influence on earnings announcement information content from financial restatement temporary disclosure and core earnings errors correction disclosure. From table 4 we can see the alternative items coefficient of core earnings errors correction disclosure and unexpected earnings (CORE*UE) is obviously negative on level 0.05, which indicates that core earnings errors correction disclosure reduces earnings announcement information content of four quarters after the disclosure; the alternative items coefficient of financial restatement temporary disclosure and unexpected earnings (DIS*UE) is negative but not obviously, which indicates that significant accounting errors correction temporary disclosure reduces earnings announcement information content of four quarters after the disclosure to certain extent; in addition, the coefficient of financial restatement temporary disclosure (DIS) is obviously negative on level 0.05 level, that is to say, under circumstance of financial restatement temporary disclosure, the investors have response to financial restatement information. But after Zeng Li's inspection of listed corporations undertaking accounting errors correction in Shanghai A stock market during 2001, around the disclosure of corporations' annual reports, there was no remarkable variance for exchanged stock volume and price, which showed no response made by investors to those financial restatement information. These show under circumstance of financial restatement temporary disclosure, the investors are more likely to distinguish financial restatement information.

According to regression result of model (2), ERC after financial restatement temporary disclosure and core earnings errors disclosure are calculated, which are obviously positive on level 0.05 level, but less than ERC after financial restatement, this explained that financial restatement temporary disclosure and core earnings errors disclosure reduce the earnings announcement information content.

In order to verify the above statistic result, we delete samples not involved earnings accounting errors correction, moreover, adjusted event research time window (- 3,+3) and (- 5,+5) are accepted to calculates unexpected earnings UR, to make regression analysis of model (1) and model (2), the main research conclusion of this paper stays same.

5. Conclusion

Based upon research on earnings information content of 452 corporations undertaking financial restatement during year 2008-2009period, it is concluded that financial restatement disclosure reduces hereafter earnings announcement information content, but the influence is just temporary, it restores to level before disclosure from the 2nd to the 4th quarter. In particular, ERC of quarters before and after financial restatement disclosure presents an U-shape; moreover, the investors have response to financial restatement temporary disclosure information; the core earnings errors correction disclosure reduce hereafter four quarters earnings announcement information contents.

6. Reference

- [1] Zhang Weiguo, Wang Xia. Incidence of Accounting Errors of China's Listed Firms[J], Accounting Research, 2004, (4): 24-29.
- [2] Li Yu. Dynamic Reason Analysis on Accounting Errors of China's Listed Firms [M], Master Degree Dissertation of Chongqing University, 2005
- [3] Zeng Li. Research on Conduction Effect of Listed Corporations Accounting Errors Correction[M]. Degree Dissertation of Chongqing University, 2003.
- [4] Anderson, K. and T. Yohn, The Effect of 10K Restatements on Firm Value, Information Asymmetries, and Investors' Reliance on Earnings[M]. Working Paper: Georgetown University. 2002.
- [5] Wu, M., Earnings restatements: A capital markets perspective[M]. Working paper, New York University. 2002.
- [6] Wendy Wilson. The Information Content of Earnings Following Restatements[M]. Working paper: The University of North Carolina. 2005.

- [7] Xue Zuyun, Wu Donghui. Whether Information Overloads Affect Investors Using Public Information[J].Accounting Research, 2004, (6): 57-65.
- [8] Li Yuxia, Li Honggui. Empirical Study of Information Contents of Quarterly Reports[J]. Securities Market Herald, 2004, (8): 21-25.