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Analysis on the Relationship between the Change of Accounting Policy and Market Share Price

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Abstract. In the increasingly complex and intense competition of modern society, enterprises in order to survive, in its business process will use a variety of ways to ensure that their own business results to meet the requirements of investors and related interest groups to achieve the purpose of continuing operations, but also That is, through various means to beautify the financial report. With the continuous strengthening of supervision, enterprises began to transfer related party transactions to the accounting policy, that is, changes in accounting policies. The effectiveness of the market that the effective capital market should be the center of all kinds of information integration, the market will absorb the information reflected in the stock of the enterprise. In this paper, by using the event study method, through the 2013 annual report disclosed in the accounting policy changes of listed companies as a sample, to discuss the impact of changes in accounting policy on the stock price.

1. Introduction

During Deng Xiaoping's period, China began its economic policy of reform and development. The implementation of the policy has brought our country from planned economy to market economy, and the market guided enterprises and the people to spontaneously start with the development and growth of capital economy. The two stock exchanges founded later have become the official symbol of the burgeoning of China's capital market. The increasingly improved supervision mechanism has made our capital market more standardized and orderly. The split share reform implemented in 2005 has made the stock market of our country move towards the international market. The rapid economic development has made the stock market play an increasingly important role in our financial system. With the development of economy in the past 20 years, China's influence in the securities market has become growingly profound and lasting. Nowadays, as an important part of China's economic development, the securities market is gradually stepping among our common people, and its influence is also going up.

Owing to the special nature of the securities market, the securities market has attracted great attention from the capital. The high attention paid to information in the securities market is the performance of its high sensitivity to the market. The complexity of the stock market determines that all the factors that exist in the stock market may impact the changes of the stock price. Complex relations and factors keep the stock market in a constant fluctuation. Meanwhile, the price of stocks is also influenced by these complex factors, which are changing all the time.

In comparison with the foreign markets, the development of China's capital market is still very immature, and the relevant policies and management are still incomplete. There is still a large amount of real or false information in China's securities market, which is always concerned by the investors of enterprises and influences their subsequent investment plans. The new accounting standard promulgated in 2006 has provided the greater room for enterprises to choose accounting policy to a certain extent. The accounting policy adopted by enterprises according to specific circumstances does not only have an impact on the profits of enterprises, but also has a certain impact on the operation decision and direction of strategy of the enterprises in the later period. As

for the investors, the expected future returns and operating conditions of enterprises are factors that need to be carefully considered, thus they will also have an impact on investors' investment behaviors, and the corresponding investor's investment behaviors are reflected in the fluctuation of stock price. Therefore, it is a necessity to study the impact of the accounting policy changes on the fluctuations of stock prices of the listed companies.

2. Literature review

Hupphorn (1953) puts forward that the main purpose of the manager of the enterprise is to balance the yield returns of different periods, rather than maximizing the reported profits, which also has brought forward new idea for the later research. Then Watts and Zimmer came up with three famous hypotheses in the study of the reasons for accounting policy choice, i.e. bonus plan, political cost and debt contract. In 1985, Healy's study found that if profit volumes fluctuate around the targeted earnings, the managers may take actions to increase their earnings during the reporting period; on the contrary, the managers will reduce their earnings during the reporting period, i.e. the details of the bonus plan play an important role in judging the impact of the bonus plan of the enterprise on accounting behavior, whilst well verifies the hypothesis of the bonus plan.

There are lots of studies on the motivation of changes in accounting policies in China. Yang Peng (2011) discusses that the audit of internal control of enterprises will influence the change of accounting policies of the enterprises, in which the regression method is applied to test the influence of internal control of enterprises on the change of accounting policies, and the factors that influence accounting policies are considered from the perspective of enterprises. Hu Liya (2015) puts forward the enterprise financial statements under the background of the change of accounting policy of the enterprise. In her analysis of the enterprise financial statements, the special impact of the change of accounting policy is focused on and then the targeted analysis and research are made on the change of the accounting policy of the enterprise. Zhang Xialian (2015) interprets the primary cause of the changes of accounting policy in enterprises as their pursuit of the maximization of the benefits, and the way enterprises take advantage of is the information asymmetry between the enterprises and investors when discussing the causes and effects of the changes of accounting policy in enterprises, Without doubt, some scholars try to use different ways to establish new theories or to explore the behavioral motives of the change of accounting policy from the new perspectives.

3. Overview of basic theory

3.1 Efficient market hypothesis

Eugene Farea, an American financier, put forward the efficient market hypothesis in the 1960s. He believed that the stock price of the market could not be predicted, which has been verified by that the market value follows the random walk model. The stock price of an enterprise is influenced by the demand of investors, and the demand of investors is mainly reflected by the accounting information issued by the enterprise. The change of accounting policy may or may not have an impact on the accounting profit of the enterprise. But the investors in the market will not care about the "past" accounting information of the enterprise, and they are more concerned about the profits the enterprise can bring to them. Therefore, only when the change of accounting policy the enterprise that affects the future earnings of the enterprise, i.e. the future cash flow and cash dividends of the enterprise, the investors will decide whether to buy stocks or not according to the degree of influence, which will also have an impact on the stock price.

3.2 Asymmetric information theory

Due to the characteristics of information generation and dissemination, there often exist the distortions and misunderstandings in the process of information transmission. In the securities

market, since the status of the interested parties of the information differs in receiving and using, the corresponding information they receive is asymmetric, and the information the buyers and sellers possessing differs. The more the authenticity and quantity of the information become, the more accurate the analytical judgment will be. In reality, this information asymmetry extensively exists. As for an enterprise, retaining more relevant information will make the investors not know the real situation of the enterprise, and the enterprise will have more commanding heights to gain more benefits. Therefore, there exist the behaviors that the enterprises use information asymmetry to make their statements accepted by the investors and relevant groups.

3.3 Enterprise contract theory

The goal of the enterprise comes from the relevant requirements of different contractors. For instance, the requirement of shareholders for the enterprise is the maintenance and appreciation of the value of the capital; the creditors of the enterprise are concerned about whether the enterprise can repay the principal and interest at maturity, etc. The requirements of the relevant contractors affect the operation of the enterprise, and the contractors are rational investors. They will choose whether to join or withdraw from the contract according to their own costs and benefits and their withdrawal will have an impact on the enterprise. The investors' consideration of the enterprise also comes from the accounting information issued by the enterprise. When the management chooses the change of the accounting policy, different accounting policies will lead to different accounting information, so as to influence the degree of investors' recognition of the enterprise.

4. Research method and hypothesis

4.1 Research method

Event study is based on the hypothesis of market efficiency, which is used to discuss the impact of a specific event on the stock price of the enterprise. This paper examines the impact of the change of accounting policy on the stock price by the virtue of event study. Firstly, a reasonable sample for the change of accounting policy should be selected, and the data of stock price before and after the event of the sample company should be possessed. Secondly, the normal and abnormal rate of return of stock price and the effective rate of return of stock price should be calculated by substituting the market model in. By comparing the abnormal rate of returns and zero, whether the change of accounting policy of the enterprise has exerted Influence on the stock price or not can be worked out.

When discussing the relationship between the change of accounting policy and stock price in event study, the abnormal rate of return should be firstly determined.

To calculate abnormal rate of return during the event period should firstly calculate the expected normal rate of return of the enterprise, which is estimated by applying the market model in the paper, namely:

$$R_{it} = \alpha_i + \beta_i * R_{mt} + \varepsilon_{it} \quad (1)$$

of which, $E[\varepsilon_{it}]=0$ and $Var[\varepsilon_{it}]=\sigma_{it}^2$

R_{it} is the rate of return of the stock i on the t day. In this paper, the daily rate of return of cash dividend of the sample company on the t day is taken as the daily rate of return of the day; R_{mt} is the market rate of return on the t day of the enterprises and the α_i and β_i are the parameters to be estimated. Taking the annual report date of the sample company as the midpoint, the stock data of [-30, 30] are used. Finally, the normal rate of return of each company's stock price during the window period is calculated based on the estimated α_i and β_i.

Secondly, the daily abnormal rate of return of each stock during the window period is calculated.

$$AR_{it} = R_{it} \quad (2)$$

AR_{it} denotes the abnormal rate of return of the stock i on the t day; $\hat{R}_{it}$ is the normal rate of return of the stock i on the t day estimated under the market model; R_{it} is the effective rate of return of the stock i on the t day.

Finally, there are daily average abnormal rates of return of some stocks during the window period.

$$AAR = \frac{1}{N}\sum_{t=1}^{N} A\,R_{it} \quad (3)$$

N is the number of samples.

4.2 The proposition of hypothesis

In the complex economic activities, there are many factors affecting the stock price of the enterprise. From the information perspective, the external accounting information of the enterprise will affect the investment action of the investors in the enterprises. For investors, when the company is in a profitable state, they will invest, and the stock price will rise. Contrarily, they may withdraw the investment and the stock price will decline. On the premise of the market efficiency hypothesis, the accounting behavior of the enterprise will affect the change of stock price. The change of accounting policy of an enterprise is related to its operating income, i.e. the change of accounting policy of an enterprise will have a certain impact on the stock price of an enterprise. Therefore, the hypothesis is put forward.

Hypothesis 1: The change of accounting policy has an effect on stock price, i.e. the abnormal rate of return is not zero.

Hypothesis 2: The impact of the change of accounting policy on the stock price of the listed company differs before and after the window period.

5. Empirical results and analysis

5.1 The analysis of abnormal return of rate

Figure 5-1 shows the connection diagram of abnormal rate of return from t_{-10} to t_{10} . It can be seen intuitively that the average abnormal rate of return of other days show a downward trend except for the -10 day on which the average abnormal rate of return is higher. Table 5-1 lists the abnormal rates of return during the window period. It can be seen that the abnormal rate of return of 21 days are not zero except for the 2nd and 6th days, which indicates that the event has an impact on the stock price. This result is cross-checked with hypothesis 1. The average abnormal rates of return of the - 8, - 3, 0, 5, 7 and 10 day is negative and those of the other days are positive. The average abnormal rate of return on the event day is - 0.35%. The reason may be that some investors leave the market after a good turn, which makes them turn to be negative. In the following three days, the abnormal rate of return is respectively 0.12%, 0.10% and 0.13% to compensate for the negative value before, i.e. some investors join in the investment, which leads to the sustained rise of the stock price. It is demonstrated that the impact of the change of accounting policy on the stock price is short-term, which will be digested by the market in a short time.

Table 5-1 Abnormal rate of return of the event window

Time t	abnormal rate of return	T statistic	P value	significance
-10	0.0033	19.5872	0.0000	***
-9	0.0012	8.3876	0.0000	***
-8	-0.0025	-6.1489	0.0000	***
-7	0.0003	2.3805	0.0100	
-6	0.0028	7.6371	0.0000	***
-5	0.0020	7.1489	0.0000	***
-4	0.0016	7.1452	0.0000	***
-3	-0.0029	-7.0102	0.0000	***
-2	0.0023	8.6332	0.0000	***
-1	0.0024	6.3233	0.0000	***
0	-0.0035	-12.5722	0.0000	***
1	0.0012	5.2314	0.2705	***
2	0.0002	3.1428	0.0000	
3	0.0013	4.3506	0.0000	***
4	0.0031	6.6232	0.0000	***
5	-0.0014	-4.6654	0.0000	**
6	0.0001	3.2435	0.0000	
7	-0.0048	1.3775	0.0873	***
8	0.0005	1.7653	0.0000	**
9	0.0022	9.4123	0.0000	***
10	-0.0023	-9.5621	0.0000	***

*significant at the level of 1%, **significant at the level of 5%, and ***significant at the level of 10%

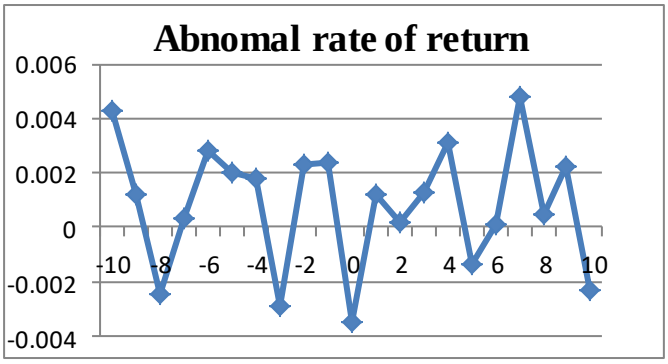

Fig. 5-1 Abnormal rate of return during the window period

5.2 The analysis of cumulative abnormal return

As can be seen from Figure 5-2, the cumulative abnormal rate of return during the window period shows a distinct upward trend; after the seventh day of the event, the cumulative abnormal rate of return shows a distinct upward trend.

Except for the 9th and 10th days, the cumulative abnormal rate of return slightly decreases. In Table 5-2, it can be seen that in 21 days during the window period, except the - 9, - 8, - 5, - 4 day, the other abnormal rates of return are obviously not zero, the abnormal rates of return of the - 10, - 9 day are negative, and those of other days are positive.

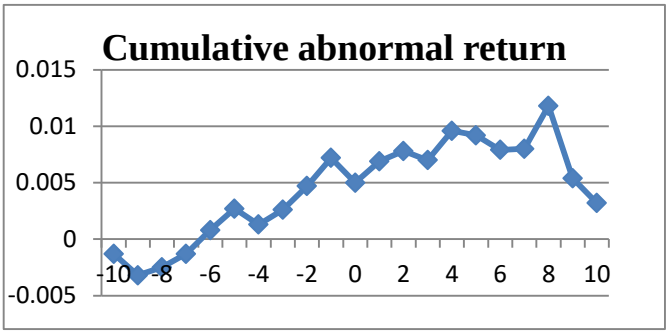

Fig. 5-2 Cumulative abnormal rate of return during the window period

Table 5-2 Cumulative abnormal rate of return of the event window

Time t	Cumulative Abnormal Return	T statistic	P value	significance
-10	-0.0013	-1.4361	0.0032	***
-9	-0.0032	-3.8881	0.1232	
-8	-0.0025	-2.1394	0.1523	
-7	-0.0013	-1.5713	0.0002	***
-6	0.0008	0.8885	0.0022	***
-5	0.0027	3.1695	0.3654	
-4	0.0013	1.0802	0.2319	
-3	0.0026	2.9189	0.0042	***
-2	0.0047	4.8856	0.0000	***
-1	0.0072	7.5961	0.0000	***
0	0.0050	2.8496	0.0046	***
1	0.0069	5.7750	0.0000	***
2	0.0078	7.9721	0.0000	***
3	0.0070	8.2832	0.0000	***
4	0.0096	10.1600	0.0000	***
5	0.0092	9.6468	0.0000	***
6	0.0075	8.6774	0.0000	***
7	0.0080	9.4142	0.0000	***
8	0.0118	13.5612	0.0000	***
9	0.0054	6.3724	0.0000	***
10	0.0032	3.8552	0.0002	***

*significant at the level of 1%, **significant at the level of 5%, and ***significant at the level of 10%

5.3 The analysis of the business performance of the enterprise

Through the impact of the change of accounting policy on the profit of the enterprise, the profit is divided into two groups: rising and falling. According to the chart of abnormal rate of return, it can be concluded from Figure 5-3, Figure 5-4 and Figure 5-5 that as for the cumulative abnormal rate of return on the event day [-10, 4], the increase of profit is higher than the decrease of profit; as for the cumulative abnormal rate of return on the event day [-20-20], and the increase of profit is lower than the decrease of profit. This shows that the impact of accounting policy on the profits of listed companies during the different periods is different. There are some differences before and after the event of the change of accounting policy, which is consistent with hypothesis 2.

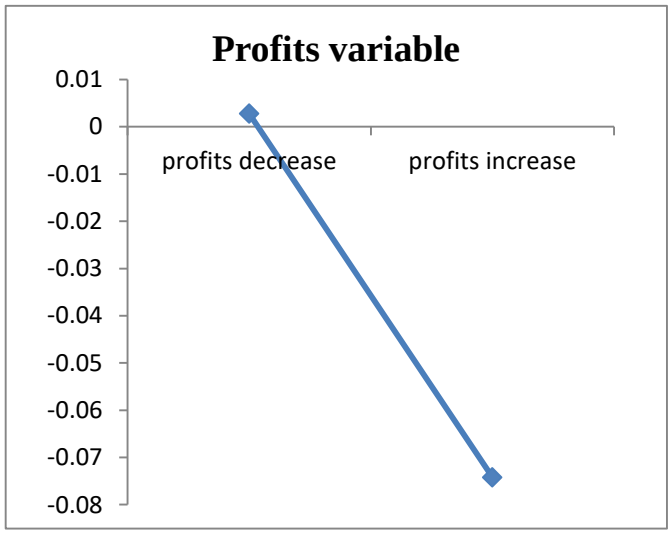

Fig. 5-3 Abnormal rate of return on the event day

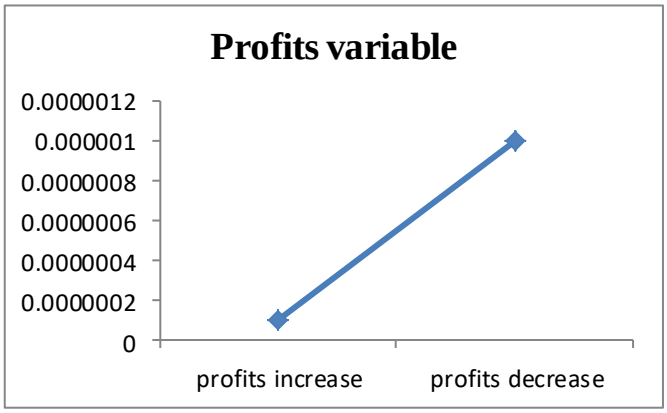

Fig. 5-4[-10, 4] Abnormal rate of return

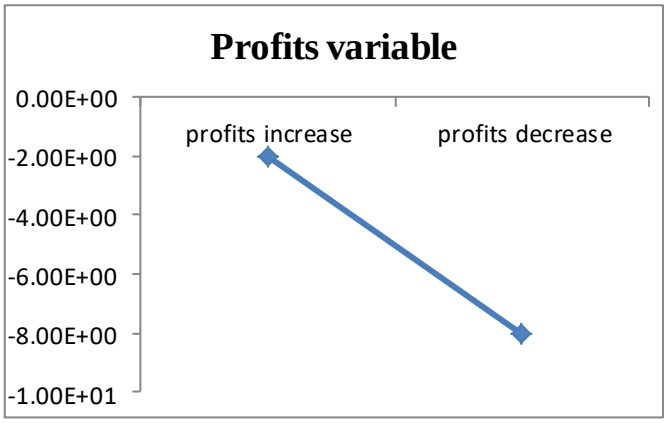

Fig. 5-5 [-20, 20] Abnormal rate of return

6. Research results

This paper uses the event study to study the change of the stock price of the listed company before and after the change of the accounting policy in 2016, and comes to a conclusion:

The market responds fairly to the change of accounting policy. The efficiency of the market considers that the securities market responds to the disclosure of accounting information by the enterprise, which is reflected in the stock price of the enterprise, i.e. the stock price will fluctuate with the disclosure of accounting policy information.

In the short run, the impact of the change of accounting policy on the stock price is limited, which will be absorbed by the market in a relatively short period of time. All abnormal returns obtained through the change of accounting policy will not last long.

As for the impact of the change of the accounting policy, it differs in the early and late stage of the event from the profit of the enterprise.

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