

The Influences of Accounting Standards Change on Value-Relevance of Accounting Earnings

Dai Bingbin, Guan Jing, and Lu Miyao

Abstract—This paper studied the correlation between earnings per share and stock price from 2005 to 2008 of AB-share listed companies in Shenzhen, and then examined value-relevance of accounting earnings before and after accounting standards change. The study found that before 2006, the value relevance of earnings prepared in accordance with China Accounting Standards lower than the value relevance of earnings prepared in accordance with International Accounting Standards. After the implementation of new accounting standards in 2007, the value-relevance of accounting earnings in Shenzhen A-share listed companies has increased, while the differences of value-relevant in AB shares decreased.

Index Terms—Accounting standards change, value-relevance of accounting earnings, dual-list shares.

I. INTRODUCTION

In the past hundred years, the increasingly frequent international trade and the booming multinational corporations made the pace of global economic integration faster. As a core element of economic driver, the capital first brings a wide range of cross-border flows. Behind the capital, convergence of accounting system plays an important role. It is economic development that makes the international coordination and development of our accounting system inevitably. On February 15, 2006, the Minister of Finance issued 38 specific criteria such as "Accounting Standards for Enterprises - Basic Standard" and "Enterprise Accounting Standards - Inventories" and so on, which became China new accounting standards and began to be implemented in the listed companies from January 1, 2007.

New accounting standards have affected positively and negatively the A-share listed companies in many aspects. For example, according to the new regulations, when companies with high debt get the debt exemption, the proceeds can be directly reflected in the income statement, which will make some high-debt companies increase their profits deliberately using debt restructuring. For another example, the regulation that asset impairment provisions are not reversed cuts off a major route to increase profits for listed companies [1].

The different impacts of new accounting standards on accounting earnings lead us to think of the value relevance of changes in accounting earnings. In recent years, many experts and scholars studied the value relevance of earnings

in accordance with China Accounting Standards (CAS) and the value relevance of earnings in accordance with International Accounting Standards (IAS), but the conclusions were different. Some experts believed that value relevance of accounting earnings under CAS is higher than value relevance under IAS, some experts hold the opposite view, and other scholars believed that the differences between the two were not obvious.

Therefore, the issue this paper first discusses is that before the change of accounting standards, whether accounting earnings in A-share market or in B-share market have higher value relevance. If the value relevance of accounting earnings in A-share market and B-share market were different, we would then study whether the accounting standards reduce the value relevance of accounting earnings of A-share listed companies. This paper would evaluate accounting standards change of 2006 in the perspective of the value relevance.

II. LITERATURE REVIEW

Since Bauer and Brown (1968) began to study the relationship between stock prices and accounting earnings, experts and scholars made many studies in the past four decades. There were a large number of accounting literature concerned the value relevance of accounting earnings. Komendi and lipe (1987) are the originators, and they estimated the relevance of accounting earnings and stock returns first time [2]. On February 28, 1992, with CSG B listing in the Shenzhen Stock Exchange, China's B-share market was born. The companies listing in the B-share market should follow the IAS (International Accounting Standards), while the companies listing in the A-share market followed the CAS (China Accounting Standards). So some experts and scholars began to compare the value relevance of accounting earnings under CAS with under IAS. Bao and Chow (1999) compared the value relevance of accounting earnings in B-share companies under CAS and IAS, and concluded that accounting earnings under IAS have higher value relevance [3]. Such views seemed to be theoretical, because the B-share listed companies had no pressure of two consecutive years of losses generated by ST, three consecutive losses to the delisting. And the B-share listed companies did not face the pressure of keeping the honor "Listed Company" and rationing shares. Due to this pressure, A-share listed companies often manipulate accounting earnings. In view of this, correlation of accounting earnings under IAS should be better than GAAP. Such literatures provided the impetus for the international harmonization of accounting standards. But not all studies considered that the

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value relevant of accounting earnings under CAS was lower than IAS. Li (2004) studied AB shares of dual-listed companies from 2000 to 2002 under different accounting standards, and found accounting information under the CAS was slightly stronger than under the IAS [4]. Pan, Chen and Lin(2003) studied correlation between accounting earnings and stock returns of AB shares in 2001, and found that accounting information prepared in accordance with the CAS was more valuable relevant [5]. Eccher (2001) studied dual-listed companies and found that for A-share investors, accounting earnings under CAS shown a higher value relevant than under the IAS, and for the B-share investors, accounting earnings under China accounting standards and international accounting standards have the same value relevance, that's say, the value relevance of accounting earnings under international accounting standards was no better than China's accounting standards [6]. Zhao (2006) found that the difference between the value relevance of accounting earnings under the CAS with the value relevance under the IAS was not obvious. Operating profits under IAS can provide incremental value relevance relative to operating profits under CAS, while non-profits under CAS can provide continuous incremental value relevance relative to under IAS [7].

After the promulgation of the new accounting standards, Wan (2009) tested the relative value correlation of the two standards with the sample of the companies issuing both A and B shares from 2001 to 2007, and found the explanatory power of information under new accounting standards on the stock price has been enhanced [8]. Lu, Wang (2009) tested the correlation between accounting earnings and stock prices in Shanghai and Shenzhen listed companies from 2005 to 2007, and the results showed that the explanatory power of accounting earnings on the stock price became weaker [9]. Zhu, Zhao, Sun (2009) compared the value relevance of accounting earnings before and after the reform of accounting standards, and found that after the implementation of the new accounting standards, the value relevance of accounting earnings had no significant increase [10]. Wang (2009) used value model to analyze the relationship between earnings per share and stock price in 2006 and 2007 respectively according to the annual reports under the old and the new accounting standards. The results showed that earnings per share under the old accounting standards had certain value relevance, while the explanatory power of earnings per share on stock prices under the new accounting standards was no better than under the old accounting standards [11]. Xue, Zhao, Xiao, Cheng (2008) found that earnings information and the net assets under the new regulations have higher value relevance compared to those under the old accounting standards [12]. Wu, Xu (2008) empirically found that the implementation of the new accounting standards have increased the relevance and reliability of financial reporting [13].

Based on the above literatures, we proposed the following hypotheses:

H1. Before accounting standards change, the value relevance of the earnings in A-share market is less than the value relevance in B-share market.

H2. Under the new accounting standards, the value

relevance of the earnings in A-share market will be increased.

III. RESEARCH METHOD

This paper selected the AB shares of dual-listed companies in Shenzhen before and after two year of the accounting standards change (2005-2008). Earnings and stock prices are from CSMAR, and the soft processing statistical data is mainly SPSS17.0.

First, we researched the different correlation of accounting earnings between A-share market and B-share market before and after the accounting standards change. And we compared the impact of accounting standards change on the value relevance of accounting earnings in A-share market and B-share market. Since IFRS followed by the B-share market has not changed, we set the value relevance of accounting earnings in B-share market as a reference, and compared the value relevance of accounting earnings in A-share market before and after the accounting standards change.

In the study of the value relevance of accounting earnings, two models can be used, that is, the yield model and the price model. In this study, we followed the price model:

$$P_{i,t}^{A/B} = a_1 + a_2 EPS_{i,t}^{A/B} + \varepsilon_{i,t}$$

Variables are defined as following:

- 1) Stock price, the explained variable $P_{i,t}^{A/B}$, is the price of stock i in year t (the arithmetic average of the closing price in the end of each month), when the "A / B" take A, it's on behalf of the A-share market price, otherwise on behalf of B-share market price.
- 2) Earnings per share, the explanatory variables $EPS_{i,t}$, represents earnings per share of stock i in year t, when taking A, it represented the earnings per share reported in A-share market, otherwise the earning per share in B-share market.

IV. RESEARCH RESULT

Description of the sample firms before the accounting standards change is shown in Table I. Before the accounting standards change, the difference of A and B shares in earnings per share is not great, while the difference of A and B shares in stock price is significant, and B-shares have a significant discount. Therefore, we need to examine whether A-shares and B-shares have value relevance before the accounting standards change. If both have value relevance, we would compare which one has higher correlation.

Table II presents the matrix correlations of stock price and earnings per share before the accounting standards change. Both A-shares and B-shares have significant positive correlation in stock price and earnings per share. However, Pearson coefficient of A-shares is less than B-shares, which shows that stock price and earnings per share in B-shares have higher correlation than in A-shares.

Before the change of accounting standards, the value-relevance in the A-share market was better than in the B-share market, which means that the value-relevance of accounting earnings under CAS is lower than under IAS. The

conclusion verified the Hypothesis 1, before accounting standards change, the value relevance of A-shares is less than the value relevance of B-shares. Therefore, international coordination and improvement of accounting standards is an inevitable trend.

TABLE I: DESCRIPTIVE STATISTICS BEFORE THE ACCOUNTING STANDARDS CHANGE

Panel A: Descriptive statistics in 2005:

| Variable | N | Mean | S.D. | Median | Min | Max |
|----------------------|----|------|------|--------|-------|-------|
| A-shares' EPS_{it} | 34 | 0.27 | 0.44 | 0.28 | -0.95 | 1.32 |
| B-shares' EPS_{it} | 34 | 0.23 | 0.42 | 0.13 | -0.95 | 1.39 |
| A-shares' P_{it} | 34 | 6.21 | 4.37 | 4.62 | 2.61 | 22.43 |
| B-shares' P_{it} | 34 | 4.07 | 3.25 | 2.87 | 1.32 | 14.82 |

Panel B: Descriptive statistics in 2006:

| Variable | N | Mean | S.D. | Median | Min | Max |
|----------------------|----|------|------|--------|-------|-------|
| A-shares' EPS_{it} | 34 | 0.28 | 0.38 | 0.27 | -0.6 | 1.06 |
| B-shares' EPS_{it} | 34 | 0.29 | 0.41 | 0.26 | -0.78 | 1.28 |
| A-shares' P_{it} | 34 | 6.81 | 5.79 | 5.13 | 2.86 | 34.72 |
| B-shares' P_{it} | 34 | 4.98 | 4.47 | 3.58 | 1.32 | 23.84 |

TABLE II: MATRIX CORRELATION BEFORE THE ACCOUNTING STANDARDS CHANGE

| Variables | | EPS_{it} | |
|-----------|----------|------------|---------|
| | | 2005 | 2006 |
| P_{it} | A-shares | 0.604** | 0.632** |
| | B-shares | 0.753** | 0.711** |

Note: ** indicates a significant correlation at the 0.01 level (bilateral).

Description of the sample firms after the accounting standards change is shown in Table III. After the accounting standards change, the financial data (including earnings per share) prepared under CAS became the same as which prepared under IAS. So unlike Table I, only one earnings per share was given in Table III.

After the accounting standards change, AB-shares' EPS is the same, but the price difference is still significant. B-shares have a significant discount relative to the A-shares. Then, we need to study if accounting earnings of AB-shares have value relevant after accounting standards change. If relevant, we would compare the value relevance of A-shares with the value relevance of B-shares.

TABLE III: DESCRIPTIVE STATISTICS AFTER THE ACCOUNTING STANDARDS CHANGE

Panel A: Descriptive statistics in 2007:

| Variable | N | Mean | S.D. | Median | Min | Max |
|--------------------|----|-------|------|--------|------|-------|
| EPS_{it} | 34 | 0.46 | 0.41 | 0.38 | 0.03 | 1.66 |
| A-shares' P_{it} | 34 | 16.44 | 12.5 | 12.55 | 6.95 | 65.01 |
| B-shares' P_{it} | 34 | 9.86 | 8.43 | 7.14 | 2.9 | 44.80 |

Panel B: Descriptive statistics in 2008:

| Variable | N | Mean | S.D. | Median | Min | Max |
|--------------------|----|-------|------|--------|-------|-------|
| EPS_{it} | 34 | 0.29 | 0.40 | 0.20 | -0.27 | 1.70 |
| A-shares' P_{it} | 34 | 11.03 | 10.9 | 7.82 | 0.73 | 65.80 |
| B-shares' P_{it} | 34 | 6.42 | 7.12 | 4.41 | 1.79 | 43.02 |

Table IV presents the matrix correlations of stock price and earnings per share after the accounting standards change. Still, A-shares and B-shares have significant positive

correlation in stock price and earnings per share. However, the correlation coefficient of stock price and earnings per share was greater in A-share market than in B-share market in 2007, which were similar in 2008. In summary, under the new accounting standards, the value relevance of accounting earnings is greater in A-share market.

After accounting standards change, the difference of accounting earnings value-relevance in A-share market and B-share market significantly reduced, which shows that China's accounting standards had a significant substantive change in the international coordination process.

TABLE IV: MATRIX CORRELATION AFTER THE ACCOUNTING STANDARDS CHANGE

| Variables | | EPS_{it} | |
|-----------|----------|------------|---------|
| | | 2007 | 2008 |
| P_{it} | A-shares | 0.706** | 0.792** |
| | B-shares | 0.697** | 0.797** |

Note: ** Indicates a significant correlation at the 0.01 level (bilateral)

Since the IAS which B-share companies follow did not change, we set the value relevance of accounting earnings in B-shares as the reference in this study, assuming that the value relevance of accounting earnings in B-share market did not change before and after the accounting standards change. Thus, we can compare the value relevance of accounting earnings in A-share market before and after the change of accounting standards change. As being seen from the Fig. 1, the difference of accounting earnings in A-shares and in B-shares became smaller. At the same time, before accounting standards change, the value relevance of accounting earnings in A-share market is lower than in B-share market, while after accounting standards change, the value relevance of accounting earnings in A-share market is almost identical with B-share market. Therefore, we can conclude that after a change in accounting standards, value relevance of accounting earnings in A-share market has improved. Hypothesis 2 was supported.

TABLE V: THE PEARSON CORRELATION COEFFICIENT IN A-SHARE MARKET AND B-SHARE MARKET DURING 2005-2008

| Pearson Correlation Coefficient | 2005 | 2006 | 2007 | 2008 |
|---------------------------------|---------|---------|---------|---------|
| A-share Market | 0.604** | 0.632** | 0.706** | 0.792** |
| B-share Market | 0.753** | 0.711** | 0.697** | 0.797** |

Note: ** Indicates a significant correlation at the 0.01 level (bilateral)

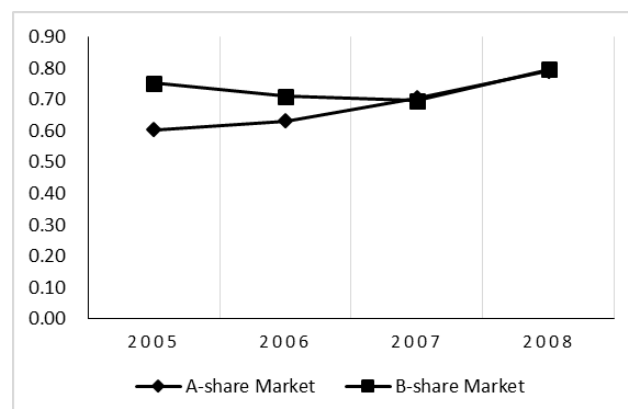


Fig. 1. The trends in value relevance of accounting earnings.

V. CONCLUSIONS AND RECOMMENDATIONS

Through the above empirical analysis, we can conclude that the change of accounting standards has improved the value relevance of accounting earnings in the A-share companies, which is not only good news for investors, but also reflects the positive effects of international coordination of China accounting standards. Today, with the quickening pace of economic globalization, China has accepted more and more foreign enterprises, and at the same time, a large number of outstanding domestic enterprises began to go abroad, the international market, which required the comparability of accounting information. In recent years, we had made our efforts to accomplish the comparability of accounting information, the differences in China accounting standards and International Financial Reporting Standards are narrowing. However, the difference was not completely disappearing. Different social systems and cultural traditions will directly or indirectly affect the development of accounting. For example, China's special political environment determines the development and interpretation of the government's absolute authority in China's accounting standards, but international financial reporting does not reflect the will of the government, which is the result of the game in the relevant stakeholders. Differences in the tax system also led to China's accounting standards differ from IFRS on the tax treatment. The efficiency of China's stock market is not high, and there is a big gap in market surveillance mechanism compared with western developed countries.

To further enhance the value relevance of accounting earnings, this paper puts forward the following three proposals: first, actively improve the guidelines for the implementation mechanism; in order to ensure coordination of accounting standards is a successful transition from the form to the substance of coordination. Secondly, strengthen supervision of accounting market; it is important to strengthen the accounting information disclosure and the regulation and punishment of the market manipulation behavior, if not effectively implemented, no matter the accounting reports were prepared in accordance with the CAS or in accordance with the IAS, the value relevance of accounting earnings would not be high. It is necessary to take reform and to establish a more uniform system to reduce the manipulation possible. Thirdly, strengthen accounting practitioners training; if the accounting practitioners have high professional judgment and professional ethics, the possibility of the behavior of deliberately withholding accounting information, disclosing the information irrelevant and even unreliable, or manipulating profit to mislead or even deceive investors would greatly decrease. So it is important to comprehensively improve the level of professional ethics and professional judgment of accounting personnel, which is necessary to maintain good accounting market development and improve the content of the accounting information.

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