

The Effect of Accounting Standards Change on Management Disclosures and Investor Information Asymmetry

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Abstract: Accounting standards change not only affects company financial management behavior, but also the investor trading activities. This study examines the effect of accounting standards change on both management disclosures and investor information asymmetry based on accounting economic consequence theory. We find that accounting standards change will significantly improve investor information asymmetry and management disclosure in the short term. The short-term effect is also moderated by investor sentiment. In the long term, accounting standards change only affects management disclosure, no effect on investor information asymmetry. We conclude that accounting standards change is an important component of the capital market, but the time costs in the short term are also worth paying attention to.

1 Introduction

As an important measure for the reform and opening in China's capital market, the Ministry of Finance promulgated new accounting standards in 2006, requiring listed companies to implement since 2007. The new standard widely adopts the measurement attribute of fair value. This accounting standard reform has provided important support for Chinese companies to move toward global capital markets. The role of accounting standards is clearly not limited to providing objective and complete accounting data. In fact, accounting standards can influence financial decisions, not just the outcome of reporting decisions (Dyreg, Mayew & Williams, 2012; Trotman, Tan & Ang, 2011). Therefore, whether or not changes in accounting standards affect the role of accounting information in the capital market has become the focus of both capital market participants and accounting academic research.

Research on the effect of accounting standards is currently focused on two aspects : (1) the effect of accounting standards change on corporate financial behavior and (2) how market responses to accounting standards change. According to Jensen and Meckling (1976), a company is a collection of contractual relationships concluded between different individuals. Baker and Wurgler (2006) suggested that changes in accounting standards will affect the contract that has been reached, which in turn affects the company behavior. Buryla(2008) found that using the straight-line method instead of accelerating depreciation to accrue depreciation would result in the company investing in some non-value-maximizing projects. The second aspect research focuses on the market reaction brought about by the publication of a specific standards. For instance, Shortridge (2009) found that the changes in the accounting standards at each stage are essentially in response to the demands of changes in the economic environment. In this new context, investor information asymmetry is considered to an important market effect of accounting standards change (Nagar, Schoenfeld, & Wellman, 2019; Guay, Samuels, & Taylor, 2016). In addition, many scholars also pay attention to the investor's investment sentiment (DeVault, Sias, & Starks, 2019; Rahmana, 2016; Arif & Lee, 2014).

Prior studies have established that the accounting standards change does affect the financial management behavior. In addition, market reaction research generally confirms that the accounting standards change will bring market reaction, in which investor sentiment is a concern for scholars. However, most studies have separated the two aspects to study, limiting a comprehensive study of

the effect of accounting standards change. This study therefore analyzes the effect of accounting standards change on both management behavior and investor market reaction.

To summarize, our research finds that accounting standards change will significantly improve investor information asymmetry and management disclosure in the short term, although it reduces investor information asymmetry through management disclosure. In the long term, accounting standards change only increase management disclosure but will no effect on investment information asymmetry. However, one point is worth noted is that there are short-term costs in the accounting standards change, which will increase the asymmetry of investor information. The moderation effect of investor sentiment will further increase this influence. Our findings suggest that accounting standards change should balance the impact on company managers and market investments, and the relationship between long-term effect and short-term effect, thereby improving capital markets.

The remainder of this study is organized as follows. Section 2 motivates our hypotheses in light of theory background. Section 3 describes our data. Section 4 provides our empirical results. Section 5 concludes.

2 Theory Background And Hypothesis Development

2.1 Accounting Economic Consequence Theory

The accounting economic consequences is first proposed by Zeff (1978), who suggested that accounting report will affect the behavior of the firm's business decisions, government and investors, leading to economic and social influence. The economic consequence of accounting standards refers to the transfer of various wealth among different interest groups (Rappaport, 1977). A large number of empirical studies have shown that accounting policies that do not affect cash flow will ultimately affect the firm's stock price (Cortese, Irvine, & Kaidonis, 2009; Hjelström & Schuster, 2011). The explanation for this phenomenon is the so-called "economic consequences of accounting". Therefore, it is very necessary to deeply explore the influence mechanism of accounting standards change, revealing the role of accounting information in resource allocation.

Drawing upon the accounting economic consequences theory, the influence mechanism of accounting standards change can divided into two aspect as follows.

2.2 The Direct Effects of Accounting Standards Change

Accounting standards change leads to the uncertainty about firm value in the accounting report. It is a key driver of many investor and managerial activities (Verrecchia, 2001). Some investors collect private information about firm value before trading, thus inducing information asymmetry and illiquidity in the pricing process. Information asymmetry among investors often refers to the percent quoted bid-ask spread (Holden and Jacobsen, 2014). Therefore, we suggested that the greater the accounting standards change, the more familiar investors need to be in the standards, which lead to the increase of investor information asymmetry. So, the following hypothesis is proposed

H1: Accounting standards change is positively related to information asymmetry among investors

2.3 The Indirect Effects of Accounting Standards Change

Managers react to accounting standards change by supplying their own disclosures, such as publishing listed company announcement. Jensen and Meckling (1976) suggested that the firm is a collection of contractual relationships, and these contracts are often based on accounting data. Zubieta et al. (2006) pointed out that changes in accounting standards will affect the contract that the manager has reached. Therefore, when the accounting standards change, the manager will actively disclose firm's information in order to maintain the contract that has been reached. So, the following hypothesis is proposed.

H2: Accounting standards change is positively related to management disclosure

According to information economics, the disclosures of management information is very

important for investors (Repo, 1989). Western empirical accounting theory suggested that under an efficient market hypothesis, the more transparent management information, the more significant the reduction in investment information asymmetry (Scott, 2000). Therefore, there is reason to believe that the more management information disclosure, the less asymmetry of investor information.

H3: Management disclosures is negatively related to investment information asymmetry

In addition, investor sentiment is a systemic risk that affects the pricing of capital markets (Baker, M., & Wurgler, J., 2007). A recent study of Nagar et al. (2019) suggested that investor sentiment is mainly determined by economic policy uncertainty. Therefore, this paper suggested that under the influence of high sentiment of investor, management disclosures will increase the asymmetry of investment information. So, the following hypothesis is proposed.

H4: investor sentiment moderates the relationship between management disclosures and investment information asymmetry. Management disclosure will increase the asymmetry of investment information under a high investor sentiment context

Therefore, we present the theoretical model emphasizes the directly and indirectly effect of accounting standards change on investment information asymmetry (Fig 1). Theorizing about such mediated model with moderation can help us better understand the influence of accounting standards change.

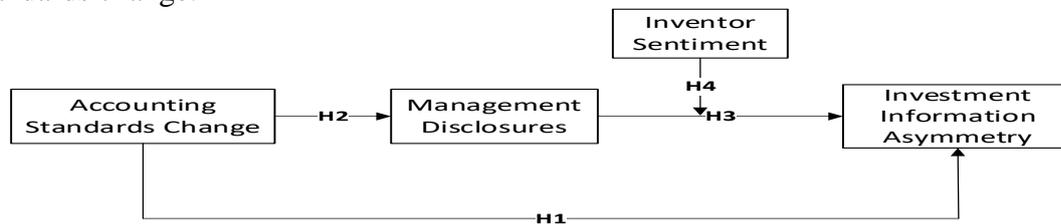


Figure 1. Research model of accounting standards change

3. Data and sample

Our sample includes the entire Chinese listed company daily database from January 1, 2006 to January 1, 2018, and this paper uses random stratified sampling method to determine our sample. We remove observations with missing data : (1) Companies with missing data and (2) companies with non-continuous trading data. All our variables are in table 1.

Table 1. Constructs, Measures, and Descriptive Statistics

Variables	Measurement	Mean	SD	Min	Max
Accounting standards change (ASC)	The degree of standards change	0.365	0.231	0	0.871
Management discourses (MD)	The number of news articles that contain discourses terms	2.98	1.384	0	5
Investor information asymmetry (IIA)	The percent quoted bid-ask spread	2.07	1.005	0.13	6.09
Investor sentiment (IS)	IPO first day rate of return	6.25	1.89	0.96	10.96

Our first proxy for accounting standards change (ASC) is measured by the degree of standards change. We follow Kothari and Sloan (1992) and use our data to estimate a model regressing measures of the degree of standards change. We compute accounting standards change (ASC) as follows:

$$BHR = \alpha_0 + \alpha_1 * \text{Earning} + \alpha_2 * \text{ASC} + \alpha_3 * \text{BD} + \alpha_3 * \text{Size} + \varepsilon \quad (1)$$

Where BHR refers to stock purchase and holding income based on monthly income. Earning refers to annual net profit of the list company. BD refers to the monthly net profit of the list company. Size refers to stock market value.

Our second proxy for management discourses is the MD index which is constructed monthly

based on the number of news articles that contain the terms “accounting standards” or “accounting change “in the public report of a listed company.

Our third proxy for information asymmetry among investors is the percent quoted bid-ask spread. We follow Holden and Jacobsen (2014) to compute monthly percent quoted bid-ask spreads for each firm-day over our sample period. We compute investor information asymmetry (IIA) as follows:

$$IIA_{it} = 100 * \frac{A_{it}-B_{it}}{(A_{it}+B_{it})/2} \quad (2)$$

Where subscript i represents each firm, and subscript t represents each day. A_{it} is the highest price of stock trading, and B_{it} is the lowest price of stock trading, where both variables are time weighted during trading hours for each day according to the procedure described in Holden and Jacobsen (2014).

The final variable is the moderator- investor sentiment (IS). Empirical studies show that IPO first day rate of return is an important proxy variable of investor sentiment (Baker and Wurgler, 2006; Verma & Soydemir, 2009). So, we use IPO first day rate of return to measure investor sentiment.

4. Empirical results

4.1 The VAR methodology

In constructing our empirical model, we use a persistence modeling technique, i.e., the vector autoregression with variable (VAR) (Dekimpe and Hanssens 1995; Luo 2009). This modeling approach allows us to capture dynamic interactions and feedback effects between our variables.

A VAR model can characterize the dynamic relationships among accounting standards change (ASC), management discourses (MD), investor information asymmetry (IIA) and investor sentiment (IS) simultaneously. Further, the dynamic influence of variables can be shown through the Granger causality test, impulse response function plots, and general forecast error variance decomposition analysis.

Specifically, a VAR model is an $n - \text{equation}, n - \text{variable}$ model, in which each dependent variable is endogenous and is a linear function of its own past values, the past values of all other dependent variables, a set of exogenous variables, and an error term. The general standard reduced-form VAR(p) model can be written as:

$$\begin{cases} y_i = \Phi_1 y_{i-1} + \dots + \Phi_p y_{i-p} + \varepsilon_i \\ i = 1, 2, \dots, I \end{cases}, \quad (3)$$

where y_i denotes k -dimensional endogenous vector of time series variables. The Φ_1, \dots, Φ_p are coefficient matrices, and p is the lagged time periods. ε_i is a vector of disturbances that have a mean of zero and are serially uncorrelated. Assuming that \sum is the covariance matrix of ε_i and \sum is a positive definite matrix, formula (7) can be expanded as follows:

$$\begin{cases} \begin{bmatrix} y_{1i} \\ y_{2i} \\ \vdots \\ y_{ki} \end{bmatrix} = \Phi_1 \begin{bmatrix} y_{1i-1} \\ y_{2i-1} \\ \vdots \\ y_{ki-1} \end{bmatrix} + \dots + \Phi_p \begin{bmatrix} y_{1i-p} \\ y_{2i-p} \\ \vdots \\ y_{ki-p} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1i} \\ \varepsilon_{2i} \\ \vdots \\ \varepsilon_{ki} \end{bmatrix}, \\ i = 1, 2, \dots, I \end{cases}, \quad (4)$$

To reduce the skewness and kurtosis of our data, we used the natural log number of the date from each time window. Because there are zeros in our data set, we adjusted the raw data by adding one to the natural log. The coefficients φ are to be estimated. p denotes the lag length.

Table 2. Unit Root Test Result after First Differences

Variables	Test Statistic	p-value
Accounting standards change (ASC)	9.348	<0.001
Management discourses (MD)	4.250	<0.01
Investor information asymmetry (IIA)	14.868	<0.001
Investor sentiment (IS)	12.531	<0.001

4.2 Hypotheses Testing

Drawing upon the VAR methodology, we can assess the short-term and long-term effects of accounting standards change (ASC) on investor information asymmetry (IIA) and management discourses (MD). Based the recent work of Song, P., Xue, L., Rai, A., & Zhang, C. (2018), we can also assess the mediation effect of management discourses (MD) and the moderation effect of investor sentiment (IS). The results are shown in Table 3.

Table 3. Path Effects of Impulse response analysis

Paths	Short-Term Effect	Long-Term Effect
Main effect		
Accounting standards change (ASC) → Investor information asymmetry (IIA)	0.480	0
Investor information asymmetry (IIA) → Accounting standards change (ASC)	0	0
Accounting standards change (ASC) → Management discourses (MD)	0.052	0.037
Management discourses (MD) → Accounting standards change (ASC)	0.015	0.018
Mediation effect		
Management discourses (MD) → Investor information asymmetry (IIA)	-0.016	0
Investor information asymmetry (IIA) → Management discourses (MD)	0.013	0
Moderation effect		
Investor sentiment (IS) × Management discourses (MD) → Investor information asymmetry (IIA)	0.041	0
Investor information asymmetry (IIA) → Investor sentiment (IS) × Management discourses (MD)	0	0

Notes: All non-zero effects are significant ($p < 0.05$); insignificant effects are displayed as 0. N=1320

(1) Main effect testing: As Table 3 and Figure 2 indicate, accounting standards change has significant short-term effects on both the investor information asymmetry (0.480, $p < 0.05$) and management discourses (0.052, $p < 0.05$). The long-term effect of accounting standards change on the investor information asymmetry is not significant (0, $p > 0.05$). The long-term effect of accounting standards change on the management discourses is significant (0.037, $p < 0.05$). These results suggest that accounting standards change positively related to investor information asymmetry and management discourses. Therefore, H1 and H2 is supported.

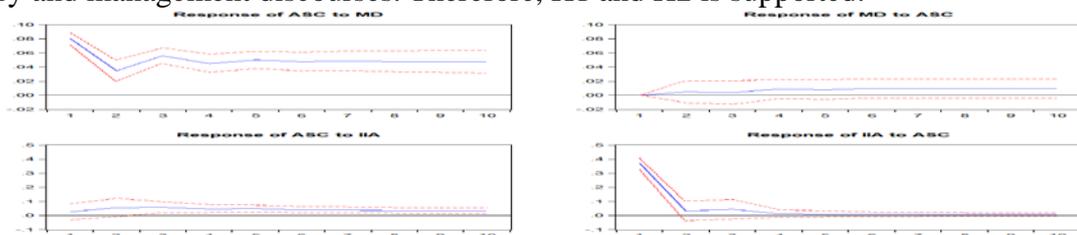


Figure 2. Main effect of Accounting standards change (ASC)

(2) Mediation effect testing: As Table 3 and Figure 3 indicate, management discourse has significant short-term effects on the investor information asymmetry (-0.016, $p < 0.05$). The long-term effect is not significant (0, $p > 0.05$). These results suggest that management discourses negatively related to investor information asymmetry. Combined with the assumption H2,

management discourses mediated the relationship between accounting standards change and investor information asymmetry. Therefore, H3 is supported.

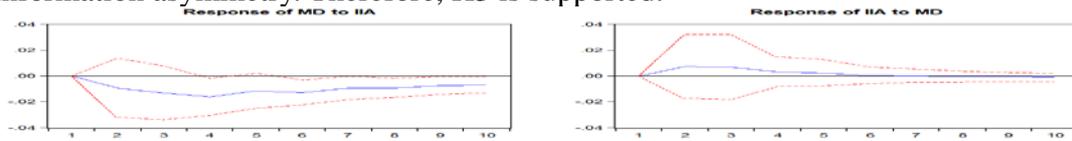


Figure 3. Mediation effect of Management discourses (MD)

(3) Moderation effect testing: As Table 3 and Figure 4 indicate, the interaction term between investor sentiment and management discourses has significant short-term effects on the investor information asymmetry (0.041, $p < 0.05$). The long-term effect is not significant (0, $p > 0.05$). These results suggest that the investor sentiment changed the relationship between management discourses and investor information asymmetry, from a negative influence (-0.016, $p < 0.05$) to a positive influence (0.041, $p < 0.05$). It suggested that the investor sentiment moderated the relationship between management discourses and investor information asymmetry. Therefore, H4 is supported.

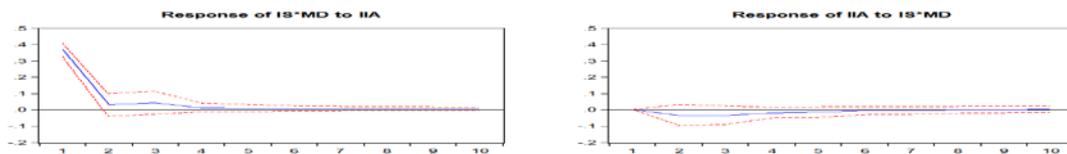


Figure 4. Moderation effect of Investor sentiment (IS)

5. Discussion and Conclusion

We briefly discuss our findings, speculate on the short-term effect and long-term effect, and highlight the theoretical and practical contributions of our work and directions for future work.

5.1 Discussion of main finding

(1) Our first finding is the short-term effect that the accounting standards change will directly improve management disclosure and investor information asymmetry. The increase of management disclosure reflects the positive response of managers to accounting standards change. The increase of investor information asymmetry means that accounting standards change will disrupt market investment confidence, causing more trading spreads. The short-term effect of accounting standards change has a time cost.

(2) By introducing investment sentiment as moderator, our second finding is that the mediation effect of management disclosure on investment information asymmetry is moderated by investment sentiment. Accounting standards change decreases investment information asymmetry through management disclosure. But, investment sentiment changes this mediation relationship, in which accounting standards change increases investment information asymmetry through management disclosure.

(3) Our third finding is the long-term effect that change in accounting standards not affect investor information asymmetry, but increase management disclosure. But the short-term effects should not be ignored, especially in today's richer social media where investor sentiment is more likely to spread. Thus, another interesting area of further research would explore how to balance the short-term effect and long-term effect of accounting standards change in the age of social media.

5.2 Theoretical implications

The present study has made two theoretical contributions. On the one hand, we show the importance of studying the comprehensive effect of accounting standards change both for firm managers and market investors in short term and long term. Given the growing importance of accounting standards change in capital market and the sparse literature in this issue, our paper offers an in-depth understanding regarding the relationship between accounting standards change,

management disclosure and investor information asymmetry.

On the other hand, by analyzing the comprehensive effect of accounting standards change, this research opens up a new research framework for accounting standards change in marketing field. Thus, our research model demonstrates the value of comprehensive consideration of accounting standards change. We strongly believe the findings generalize to other accounting information.

5.3 Practical implications and future research

This finding also has practical implications on how managers and investors response to accounting standards change in marketing. First, investors should strive to rationally look at the changes in accounting standards and prevent the irrational impact of investment sentiment, such as timely mastery of investor sentiment diffusion and perceived psychological calculation of accounting standards change.

A second important practical implication is for governments. Governments should strive to balance the short-term effect and long-term effect of accounting standards change in capital market. According to the actual situation in the local area, choose whether to pursue short-term goals or long-term goals for accounting standards change.

Our findings contribute to the ongoing research on the financial market implications of accounting standards. One could conceivably extend our study to the information environments of other contexts.

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