

The Disclosure Effect of Revenue Recognition and Allowance for Accounts by the Approach of Critical Accounting on Information Asymmetry

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Received: May 14, 2015

Accepted: August 27, 2015

ABSTRACT

People engaging in capital market make their decisions based on useful information. Those who formulate accounting standards invariably seek to provide the capital market with the required information by financial reporting and reduce information asymmetry. This paper, thus, aims to study the way of disclosing two elements of critical accounting including revenue recognition and allowance for doubtful accounts a researcher-developed scale. The employed data contain a sample of 58 companies listed on the Tehran Stock Exchange in a 12-year period from 2001 to 2012.

KEYWORDS: Revenue Recognition, Allowance for Accounts, Critical Accounting, Information Asymmetry

1. INTRODUCTION

According to critical accounting, accounting tends to support economy and social structure and consolidate the unequally distribution of power and wealth in the society. Therefore, a major part of accounting research has been conducted on the basis of this perspective that the current realities can intrinsically be specified and identified by research. Concrete realities are usually considered independent of human factors. As a result, human factors are not viewed as the producers of realities. They are though factors characterized by observation.

Information asymmetry occurs when the stakeholders do not have access to the confidential information available for managers. Sufficient information about market and quickly and timely communication of information about securities valuation have been founded to be closely connected with market efficiency. Therefore, the more optimal disclosure of critical accounting elements or major accounting procedures is socially important. It significantly helps improving the quality of voluntarily financial disclosures, improving financial reporting and reducing the information asymmetry.

2. Theoretical Principles and Literature Review

2-1. Critical Accounting policies (Major Procedures)

U.S. Securities and Exchange Commission (December, 2001) issued a guide to demand for improvement and higher clarity in MD&A. The critical accounting procedures take their root from FR60 referring to a fact according which management should present a clear discussion about the effect of management judge according to notes accompanying financial statements.

The disclosure requirements of elements, based on critical accounting, are as follows:

- Defining and clarifying the accounting estimates and how they are developed, suppositions applied to estimate and any logical changes
- Explaining the effect of interested estimates of changes in financial statement and the results of operational function
- Analyzing sensitivity explaining how the changes of critical accounting estimates affect financial results
- Presenting chronological information about prior changes in critical accounting estimates in relation to the effect of changes on financial statements
- Disclosing particular parts affecting critical accounting based procedures
- Submitting critical accounting estimates to the accounting committee

In a research study titled "the disclosure of critical accounting procedures", Levin and Smith studied the application of disclosing critical accounting procedures. Using Dechow and Dichev (2002) model, they used the accounts receivable, inventory accounting, and allowance for retirement as critical accounting elements. According to findings, companies adopting critical accounting procedures are more efficient than those do not use such procedures. Disclosing procedures, thus, results in improved efficiency of investment decisions (Levin and Smith, 2011).

Assessing the effect of disclosing critical accounting procedures on the performance assessment criteria and the quality of financial reporting using the approach of disclosing critical accounting elements to the benefit

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of investment decisions, Rahnamaye Roodposhti, Yaghubnejad, Noorifard, and Goodarzi (2013) examined the additional contents of disclosure. They concluded that in the years disclosures occurred, the parameters of performance assessment increased and the quality of financial reporting did not have any substantial change. Additionally, refusing to disclose critical accounting elements could result in profit management (Rahnamaye Roodposhti, Yaghubnejad, Noorifard, and Goodarzi, 2013).

2-2. Information Asymmetry

The price difference of buying and selling of shares in capital markets with information asymmetrically distributed is known as the effect of information asymmetry. In such case, sellers propose higher shares price. Lacking sufficient information to assess the shares, on the other hand, buyers' offer is averagely priced shares. In the literature of finance, the uncommon distance between buying and selling prices represent the level of information asymmetry between buyers and sellers (Vakilifard and Rostami, 2010).

Armstrong et al. (2011) concluded that more competitive the capital market, the smaller difference the companies with high information asymmetry would have in their cost of ordinary share capital than companies with lower information asymmetry. Hence, information asymmetry is not a determining factor in the cost of ordinary share capital. Put it differently, in a more competitive market, the information available for investors has a small effect on cost and the information asymmetry less influence capital costs (Armstrong et al., 2011).

Paprocki and M.Stone (2004) conducted a research study titled "is the lower quality of critical accounting disclosure related to increased information asymmetry?" They presented a model, for the first time, determining the quality of disclosure. The model consisted of four fundamental factors: the Altman Z-score, book value to shareholders' equity ratio, debt ratio and return on equity. Results showed that companies with high quality disclosure had less information asymmetry (Paprocki and M.Stone, 2004).

3. RESEARCH METHODOLOGY

This is a practical research study with a statistical population including companies listed on the Tehran Stock Exchange from 2011 to 2012 (12-year period), sampled by systematic elimination. All companies in the statistical population form the statistical sample with following conditions:

1. Companies with fiscal year closing on March 29;
2. Companies whose shares ordinarily traded in the capital market during the research without a trade interval of more than 3 months;
3. Companies not among financial and investment companies having their own particular rules and circulars
4. Companies with their required information available.

Having met all requirements of systematic elimination, we selected 58 companies to pass the test in a 12-year period (696 years-companies).

Considering the studied companies' data, we conducted the sampling process. Then, regarding the lack of binding requirement for the organizations setting standards on financial reporting, including Auditing and Stock Exchange Organization, we studied obligatory disclosures and lack of a special form for this subject, and then examined the notes accompanying financial statements and board's reporting on company's detail. Having determined those reports disclosing the critical elements based on a researcher-developed scaled and the Journal of U.S. Securities and Exchange Commission, number 60, we checked the disclosure rank and the level of information asymmetry within studied years. Data were then examined by the random effect model and panel analysis, and the effect of disclosing the major elements of accounting was investigated according to the information asymmetry in the period with or without disclosure.

4. Research Model and Variables and Measurements

In this section, we used panel analysis to study and estimate the general model. The proposed model is as below:

$$\ln(Y_{it}) = \beta_0 + \beta_1 X_{1it} + \varepsilon_{it}$$

The independent variable is the quality of disclosure and the dependent variable is the information asymmetry. The null and alternative hypotheses are:

Independent Variable

The independent variable is the quality of disclosing the way of revenue recognition and allowance for accounts by critical accounting.

Dependent Variable

The dependent variable is information asymmetry calculated as follows:

$$spread_{it} = \frac{AP-BP}{\frac{AP+BP}{2}} \times 100$$

Spread: the price difference of buying and selling of shares

AP: the first selling offer from the company *i* in the period *t*

BP: the first buying offer from the company *i* in the period *t*

5. Research Hypotheses

1. The information asymmetry of presented reports in the periods of disclosing revenue recognition is significantly associated with critical accounting approach and its non-disclosure periods.
2. The information asymmetry of presented reports in the periods of disclosing the way of estimating allowance for accounts is significantly associated with critical accounting approach and its non-disclosure periods.

6. Research Findings

As mentioned above, the appropriate model is initially selected from others (merged model, model with fixed effects, and model with random effects). The following table presents Chow's and Hausman's test for identifying the suitable model:

Table 1: tests to find the suitable research model

Effects test	Chow's or Limer's Test			Hausman's Test			Conclusion
	Value	Degree of Freedom	Probability	Chi-Squared Value	Degree of Freedom	Probability	
F	2.30	(57, 579)	0.000	1.66	1	0.197	Model with Random Effects

As the Chow's test probability for all models was smaller than 0.05, the employed model had isolated effects for companies. The Hausman's test probability of information asymmetry was 0.197, which was greater than 0.05. The random effects were, thus, confirmed for the used models. These models were used to study hypotheses. The following table presents the panel analysis results:

Table 2: fit and estimate of model parameters

Parameters	Coefficients	Standard Deviation	T-value	Probability	Results
Constants	2.373	0.266	8.935	0.000	Positive and Significant
Disclosure Rank	-0.324	0.133	-2.435	0.015	Negative and Significant
F		5.92		F Probability	0.015
Determination Coefficient		0.19		Durbin-Watson	1.82

According to the above table, the model was estimated by random effects. The probable level of significance is 0.015 which is smaller than 0.05. Therefore, the null hypothesis is rejected at the confidence level of 95 percent. In other words, there is significance at the confidence level of 95 percent. The coefficient of determination is 0.19 stating the 19 percent of any change made by independent variable (disclosure rank) in the dependent variable. The value of Durbin-Watson statistic is 1.82. Values which are close to 2 show lack of auto-correlation of residuals. This is another regression hypothesis. Therefore, there is no auto-correlation between residuals.

To estimate coefficients, the following hypotheses can be done using sub-graduation t-statistic. Null and alternative hypotheses are as follows for y-intercepts or constant values:

$$\begin{cases} H_0 : \beta_0 = 0 \\ H_1 : \beta_0 \neq 0 \end{cases}$$

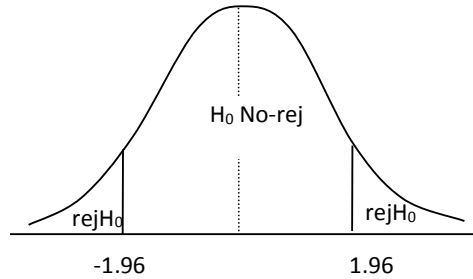
It is written for the independent variable as follows:

$$\begin{cases} H_0 : \beta_1 = 0 \\ H_1 : \beta_1 \neq 0 \end{cases}$$

The test statistic is calculated as follows:

$$t_{\beta_i} = \frac{\beta_i - 0}{S_{\beta_i}} \quad i = 0,1$$

High statistic distribution is standard for normal distribution samples. Therefore, rejected area and non-rejected area are as follows:



The t-statistic for disclosure rank is -2.43 (significant and negative). As it is smaller than -1.96, null hypothesis is rejected. Put it differently, there is an inverted relation between disclosure rank and information asymmetry. The t-value is 8.93 for y-intercept. The null hypothesis is, thus, rejected at the confidence level of 95 percent.

The estimated model is as follows:

$$Ln(Y_{it}) = 2/37 - 0/324X_{lit}$$

This means that information asymmetry reduces by 0.324 per any unit of growth in the disclosure rank.

Conclusion and Discussion

In this paper, the quality of the way of disclosing revenue recognition and the allowance for accounts was analyzed by critical accounting as the independent variable and the information asymmetry as the dependent variable.

First hypothesis result: regarding the results presented in panel analysis tables, it was concluded that increased quality of the way of disclosing revenue recognition based on critical accounting in financial statements or the board's reports, the information asymmetry decreases.

Second hypothesis result: regarding the results presented in panel analysis tables, it was concluded that increased quality of the way of disclosing allowance for accounts based on critical accounting in financial statements or the board's reports, the information asymmetry decreases.

Our results support Paprocki's and Stone's (2004) findings. They found out that companies with higher quality disclosures based on critical accounting had less information asymmetry. Therefore, the leading hypotheses were confirmed.

Table 3. The summary of research hypotheses

Research Hypotheses	Results
The information asymmetry of presented reports in the periods of disclosing revenue recognition is significantly associated with critical accounting approach and its non-disclosure periods.	Confirmed
The information asymmetry of presented reports in the periods of disclosing the way of estimating allowance for accounts is significantly associated with critical accounting approach and its non-disclosure periods.	Confirmed

Studying the other elements referred in the Journal of U.S. Securities and Exchange Commission, number 60, future studies are suggested to examine their effects on other financial indexes including the quality of accrual elements and analyze the effect of each element on financial statements.

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