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The Effect of Accounting Standards on the Quality of Financial Reporting in the Listed Companies in Tehran Stock Exchange

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Abstract : This research studied the effect of the implementation of accounting standards on the quality of the financial reporting in Tehran Stock Exchange companies. Financial reporting includes a wide range of reports among which the financial statements are very essential. The quality of the financial reporting is indeed the ability of the financial statements to convey the information of the companies' operation in general and for prediction of the expected cash flows for the investors in particular. In this research we have used the concept of relevant value from the earnings management indexes analysis to find the effects of implementing the accounting standards on the quality of the financial reporting. The statistical population of the research includes all listed companies in Tehran Stock Exchange, which the sample of this research contains 64 companies. The statistical analysis has been done using linear regression and paired difference test. The obtained results show that the implementation of the accounting standards decreases the earnings management. Moreover, the reported accounting values under the accounting standards have the relevant value.

Keywords: Accounting standards, Financial reporting, Quality of financial reporting, Earnings management, Relevant value

1. Introduction

The increasing development of the sciences and technologies in recent decades has increased the size and scope of the generated information for the human societies considerably and it has enhanced and accelerated the communications. The continuous changes and rapid achievements in all business units have made the businesses provide reliable and comparable financial information. One of the most important necessities for providing such financial information is to regulate and implement the accounting standards. Such standards have to follow the general principles of accounting knowledge and to be consistent with the environmental necessities such as the type and range of the economic activity, the scope of activities of the different economic units, legal rules and regulations, and social norms and values. The users of financial information (like the investors, creditors, government, etc.) need some clear and reliable information to make decisions for different economic sections, while their most important available information is the set of reports known as financial reporting. Financial reporting in the business units is the reflection of the informational needs and the expectations of different groups who use financial statements to make economic decision, to plan, to monitor, and to evaluate the managers' accountability. Thus making the economic decisions and assigning the resources optimally is not possible without accessing reliable and valid information. Financial information of the commercial units is presented by the boards of directors at the end of the financial year to the beneficiaries and the shareholders in form of the financial reports based on the main financial statements. The mentioned financial reporting is useful if the qualitative features such as the relatedness, verifiability, comparability and etc. are considered. Financial reports will have a doubled value and can be a base for the decisions of the shareholders and beneficiaries if they are investigated by independent auditors. In this regard, the existence of the integrated rules and regulations in accounting is necessary. These rules and regulations are called accounting standards. Standards are binding rules that guide the accountants and they have to be defined and formulated with regard to the national conditions of each country.

In Iran, accounting standards came to be binding in 2001 after which the financial statements of the commercial units have to be accord to these accounting standards. Thus it is expected that the quality of financial reporting has been improved considerably after binding the Iranian national accounting standards.

2. Literature review

Accounting standards are the governing rules of the accounting work. Accounting standards express what sort of information has to be mentioned in the financial reporting. Moreover, the accounting standards with high quality are necessary for the efficient performance of the capital market because the decisions about the capital assignment are increasingly relied on the understandable and reliable financial information (Saqafi, et al., 2009: 23-50). The final product of the financial accounting process is the presentation of financial information to different users including the internal and external users in form of the accounting reports. Those accounting reports that aim to provide informational needs of the external users are the subject of financial reporting.

Among the other components of the financial reporting one can refer to cases such as the managers' reports on the activity of the commercial unit and the analytical reports of the managers along with the report of the independent auditor and the financial statements under the title of annual reports. Other financial reports which are written for some specific goals and cases usually include the financial reports for presenting to banks in order to request for the banking facilities and finances, feasibility and briefing reports by the board of directors in order to increase the capital in case of the corporate, and tax returns.

Chen, et al (2009) tried to compare the accounting quality of 15 companies of EU before and after implementing the International Financial Reporting Standards (IFRS) in 2005. These researchers aimed to evaluate the accounting quality of 5 main factors: smoothing, earnings management, accruals quality, and on-time losses identification. According to their findings, the best level of the accounting quality has been observed after accepting the international standards. In this period, the managers did the earnings management less than the other periods but the quality of the accruals was increased considerably. But they observed undesirable conditions with regard to the income smoothing and its definition in the on-time identification of the big losses after the acceptance of international financial reporting standards. The researchers state that the mere change in the accounting standards doesn't eliminate the motivation for earnings management and if a company has a strong motivation for the earnings management, the mere change of the accounting standards cannot lead to higher quality of the accounting.

Gassen (2006) found that the German companies which have accepted IFRS voluntarily since 1998 have had more stability, less predictability, and less conservativeness for their benefits in comparison to other German companies which have used local GAAP. These findings are consistent with the findings of Barth (2007) on the relationship between implementing IFRS and higher accounting quality. The findings of this latter research show that the change of accounting standards doesn't eliminate the motivations for earnings management. If the managers of the company have strong motivations for earnings management such as keeping their power and receiving the rewards, then the mere changes of the accounting standards cannot lead to change the quality of accounting and reporting.

On the other hand, Kohlbeck and Warfield (2010) studied the effects of formulating accounting standards on the quality of accounting in 2008 when the American Board of Standardization was heavily criticized for its attempts in coordinating the international standards. The findings of this research show that no difference has been observed in the profit prediction before and after the implementation of new accounting standards. According to the results of this latter research, the mistakes in analysts' prediction and the quality of accruals have been decreased due to the mentioned standards, but the values relating to the balance sheet items have increased.

In another research, Barth, et al. (2007) studied 21 countries during 1994 to 2003 in order to find the effects of accepting IFRS on the accounting quality. The results of this research reconfirmed Barth's previous findings (2006). This research states that we cannot claim that the change of the quality is merely run by the changes in accounting standards because the managers' motivations for financial reporting are affected by the economic and politic conditions of the country as well.

Barth (2006) compared the quality of accounting in the companies who used Iinternational Accounting Standards (IAS) and those companies who followed generally accepted US GAAP. He intended to find if IAS leads to less earnings management, more on-time identification of the losses, and more relevant values for financial information in comparison to US GAAP. The results showed that not only there is no considerable and significant difference between the two standards, but in some cases, the companies who follow IAS have a lower quality of accounting in terms of the profit smoothing, correlation between accruals and cash flow, on-time identification of the losses, and the relationship between the financial information and the stock prices.

Finally, Vented Loo and Gancharov (2005) studied the effect of accepting or rejecting the International Standards of Financial Accounting on the accounting quality and found that there was no significant difference between the earnings management of the German companies which have accepted IFRS voluntarily before 2001 and those German companies which have used local GAAP.

3. Methodology of the research

The methodology of this research is deductive-inductive. It is deductive because we it uses library, articles and internet resources for its theoretical framework and literature review; and it is inductive because the aim of collecting the data has been to confirm or reject the hypotheses. Moreover, in terms of the research type, this is an analytic-functional research. Functional researches are those researches in which the theories, principles and techniques are used for solving real problems.

This research has two main hypotheses as follow:

a) The implementation of the accounting standards decreases the earnings management
b) Financial information that is reported under the accounting standards has the relevant value

3.1. Variables of the research

3.1.1. First hypothesis

If we review the available literature on the assessment of earnings management we find that previous studies on determining the behavior of the earnings management have mainly focused on explaining the accounting methods in order to test the relation between a variable of the accounting method and a number of descriptive variables. In defining the accounting methods, four following approaches are more common:

a) Single procedure (e.g. Hagerman and Zmijewski, 1981).
b) Multi procedure (e.g. Hagerman and Zmijewski, 1981; Press and Veintrap, 1990; Thomas and Jones, 1996)
c) Net accrual (e.g. Heiley, 1985; De Angelo, 1988).
d) Arbitrary items of the total accruals (e.g. Jones, 1991).

Three above-mentioned definitions of the accounting have been heavily criticized for their weaknesses and consequently, they have led to the weaknesses in the conducted tests. In 1995, Dechow, et al. evaluated the relative performance of 5 arbitrary accrual methods of Rahili, De Angelo and Jones's modified method to know the earnings management. According to 4 conducted tests, they found that Jones's modified version (1991) is a stronger test for studying the earnings management. Thus in this research we use Jones's modified method as established by Dechow for estimating the arbitrary current accruals. This model uses the total accruals approach.

In this research we use the current accruals because the application of incurrent accruals for the earnings management is relatively limited and thus it seems that the volatility size of these items is less than the current accruals. The variable used in the accrual model for using in separating the arbitrary section is the total current accruals. To calculate this assumption we used secondary information by which the researchers use the accruals to discover the earnings management. The applied relations for calculating the earnings management are as follow:

$$\frac{TAC_{it}}{TA_{it}} = \alpha_0 \frac{1}{TA_{it}} + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i,t-1}} + \alpha_2 \frac{PPE_{it}}{TA_{it-1}} + \varepsilon_{i,t}$$

Where:

TAC_{it}: Total current accruals in the year t for company i;

ΔREV_{it}: The changes of the sale revenue and sale equals in the year t minus the sale in year t-1;

ΔREC_{it} : Changes in the accounts receivable (the difference between the accounts receivable at the end of each year with the accounts receivable at the beginning of that year);

PPE_{it} : Gross tangible fixed assets (Fixed assets of each year after subtracting accumulated depreciation) in the year t for company i;

TA_{it} : Total assets in the year Tt-1 for the company i;

TCA =ΔCA – ΔCL – ΔCash + ΔSTDEBT-DEP

ΔCA = Change in the current assets

ΔCL = Change in the current debts

ΔSTDEBT = Change in the current share of the long-term debts

ΔCash = Changes in the cash

DEP = Costs of the company depreciation

Arbitrary accruals are obtained from the difference of total accruals and non-arbitrary accruals as follow:

$$TAEM_{it} = \frac{TAC_{it}}{TA_{it}} - \alpha_0 \frac{1}{TA_{it}} + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i,t-1}} + \alpha_2 \frac{PPE_{it}}{TA_{it-1}}$$

Then we used paired difference test to confirm or reject the hypotheses.

4.1.2. Second hypotheses

This hypothesis is assessed by two following relations:

$$P_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 NPPS_{i,t} + e_{i,t}$$

and

$$AR_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 BVCHA_{i,t} + a_2 NPPS_{i,t} + a_4 NPCHA_{i,t} + e_{i,t}$$

Where

$P_{i,t}$ = Market value of the equities

$AR_{i,t}$ = Annual stock returns

are the dependent variables, and

$BVPS_{i,t}$ = Book value per Share

$NPPS_{i,t}$ = Net profit per share

$BVCHA_{i,t}$ = Change in book value of each share i in the year t of the year t-1

$NPCHA_{i,t}$ = Change in net profit of each share i in the year t of the year t-1

are the independent variables of the research.

We have used regression relation to test this hypothesis.

4. Results

4.1. Testing the first hypothesis

The implementation of the accounting standards decreases the earnings management.

H0 and H1 of the above hypothesis are as follow:

H0: The formulation and implementation of the accounting standards doesn’t lead to the decrease of the earnings management in the financial reporting of Tehran Stock Exchange companies.

H1: The formulation and implementation of the accounting standards leads to the decrease of the earnings management in the financial reporting of Tehran Stock Exchange companies.

In order to test this hypothesis we have to compare the difference between the earnings management in the years 1999 and 2000 to the available difference in the years 2001 and 2002. Since the data has been collected for 4 industries, we calculate these differences per the industries and then assess them totally to confirm or reject the hypothesis.

The difference in the earnings management of the years 1999 and 2000 has no significant difference with the difference of the earnings management in the years 2001 and 2002 in all industries.

H0 and H1 of the above hypotheses are as follow:

$$H_0 = \mu_{79-78} - \mu_{81-80} = 0$$
$$H_1 = \mu_{79-78} - \mu_{81-80} \neq 0$$

The results of the paired t-test are summarized in table 1.

Table 1. Paired difference test

Variable	t statistic	Degree of freedom	Sig.

Difference between the earnings management in the years 1999-2000 and the years 2001-2002	6.724	63	0.000

Considering the obtained value of the significance level, our zero hypothesis (implying the lack of difference between the earnings management in all industries) is rejected (sig<0.05); i.e. there is a significant difference between the earnings management in all industries in the mentioned years.

4.2. Testing the third hypothesis

Financial information that is reported under the accounting standards has the relevant value.

H0 and H1 of the above hypothesis are as follow:

H0: Accounting measurements that are reported under the implementation of the accounting standards has not the relevant value.

H0: Financial information that is reported under the accounting standards has the relevant value.

These two assumptions are assessed by the two following relations:

$$P_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 NPPS_{i,t} + e_{i,t} \qquad (2-4)$$

And

$$AR_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 BVCHA_{i,t} + a_2 NPPS_{i,t} + a_4 NPCHA_{i,t} + e_{i,t} \qquad (3-4)$$

4.3. Testing the second hypothesis based in the first regression relation

First we test the first relation.

Table 2. Results of analysis of the second hypothesis, relation 1

Sample: 256 Included observations: 256				
$P_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 NPPS_{i,t} + e_{i,t}$				
Method: Panel Least Squares				
The coefficient of determination	0.398709			
Modified coefficient of determination	0.393956			
Regression standard deviation	4854.850			
F	83.88076			
Durbin-Watson statistic	1.652195			
Probability	0.000000			
Explanatory variable	Coefficient	t statistic	Prob.	Sig. level
Latitude	2849.179	6.062914	0.0000	Significant
BVPS	1.397803	7.042236	0.0000	Significant
NPPS	1.201309	6.049745	0.0000	Significant

Our criteria for confirming or rejecting H0, is the significance level. In table 2, considering the significance of the test (sig<0.05) and the correctness of the regression presuppositions, the zero hypothesis (implying the invalidity of the regression relation) is rejected and thus we can claim that the regression relation is valid.

4.4. Testing the second hypothesis based in the second regression relation

$$AR_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 BVCHA_{i,t} + a_2 NPPS_{i,t} + a_4 NPCHA + e_{i,t} \quad (4-4)$$

Second regression relation

First we test the second relation.

Table 3. Results of analysis of the second hypothesis, relation 2

Sample: 256 Included observations: 256				
$AR_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 BVCHA_{i,t} + a_2 NPPS_{i,t} + a_4 NPCHA_{i,t} + e_{i,t}$				
Method: Panel Least Squares				
The coefficient of determination	0.769586			
Modified coefficient of determination	0.762604			
Regression standard deviation	3494.951			
F	110.2204			
Durbin-Watson statistic	1.953958			
Probability	0.000000			
Explanatory variable	Coefficient	t statistic	Prob.	Sig. level
Latitude	3025.452	4.982667	0.0000	Significant
BVPS	1.013809	2.650298	0.0086	Significant
NPPS	1.623630	5.645490	0.0000	Significant
BVPCH	-0.396486	-1.129153	0.2599	Insignificant
NPCHA	0.517751	2.173062	0.0307	Significant

Our criteria for confirming or rejecting H0, is the significance level. In table 3, considering the significance of the test (sig<0.05) and the correctness of the regression presuppositions, the zero hypothesis (implying the invalidity of the regression relation) is rejected and thus we can claim that the second regression relation is valid for testing the second hypothesis.

5. Conclusion

The results of our statistical analysis show that the hypotheses 2 and 3 are confirmed using the statistical methods but the first hypothesis of the research is rejected. In other words:

a) The implementation of the accounting standards decreases the earnings management.

b) Financial information that is reported under the accounting standards has the relevant value.

Our obtained results are consistent with the results of researchers such as Christiansen, et al. (2007), Goodwin, et al. (2008), Iatridis and Rouvolis (2010) and Poomery and Thornton (2008). The findings of these researchers show that the quality of financial reporting has been different before and after the acceptance of international standards.

But the findings of some researchers such as Chen, et al. (2009), Barth, et al. (2007) and Ball, et al. (2000) are not consistent with our findings in this research. The mentioned researchers have found that some factors like the existence of strong motivations for the earnings management in the managers and the lack of change in the economic and political structures of the country simultaneous to the change in the accounting standards are the main reason for the lack of improvement in the quality of the financial reporting after the implementation of the accounting standards. According to these researchers, having high-quality standards is the necessary condition for having the high-quality financial reporting but it is not the sufficient condition. They believe if the managers have strong motivations such as preserving their power and receiving the rewards, then the change of the standards will not necessarily lead to the improvement of the financial reporting. The lack of enough knowledge in the managers for applying the standards and the lack of suitable trainings for them will lead to the inefficiency of the accounting standards as well (Eimhalf, 2003).

In the scope of the Iranian researches, our findings in this research are consistent with the findings of Mohammad Karimi (2003-4). In his research, he has concluded that in the eyes of the investors, providers of the financial statements and auditors, the Iranian accounting standards that came to binding since have been useful for financial reporting with regard to the economic conditions of Tehran Stock Exchange companies. But the findings of our research are not consistent with the findings of some researchers such as Leila Asadi (2003-4), Mona Aliakbari (2008-9) and Zadollah Fathi (2009-10) who believe that the Iranian accounting standards have failed to have a significant effect on the improvement of the quality of financial reporting.

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