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THE RELATIONSHIP BETWEEN CONSERVATISM AND EARNINGS QUALITY IN TEHRAN STOCKS EXCHANGE

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ABSTRACT

The present study aims at finding some evidence regarding the relationship between conservatism and earnings quality. To do so, 135 firms out of accepted firms in Tehran Securities Bourse, from 2006 to 2012, were analyzed. By using Panel Data Regression model and Equality test comparison, the results show that in confidence level of 95% there is a direct relationship between conservatism and earnings quality. In means that conservatism can increase earnings quality and reduce the conflict of interests between the investors and the management. Therefore, it is recommended to economic managers to adopt some conservative approaches in recognizing incomes and costs in order for the reported earnings to have higher quality in terms of proximity to cash.

Keywords: *Conservatism, Earnings quality, Earning management*

INTRODUCTION

Capital market has a vital and significant role in countries' economy. Therefore, paying attention to this market and its fundamental basis of decision making is necessary. One of the key elements of decision making in these markets is the firms' financial statement, especially their profit and loss statement, which represents the firms' operating functions in a financial period and shows the amount of profit and loss in that period. Financial statements are considered as the fundamental basis of most decision making and stock pricing procedures, in a way that their accuracy, reliability, predictability, and realization will have a direct relationship with decisions and evaluations. According to the major weaknesses, defects, and insufficiencies in the process of providing profit and loss, as well as the confliction of interests among the investors and information suppliers, the use of estimation in providing some elements of profit and loss, taking advantage of the limitations of conservatism and some issues such as income smoothing and so on, and using profit and earnings as the main criterion of decision making process will be threatened. This matter doubles the necessity of the evaluation of the issue. A good way to reduce the mentioned risks is the consideration and evaluation of the earnings components, which is mentioned in professional areas as earnings quality. In recent years, especially after the recent international financial scandals of the firms, an increasing attention is being paid to the earnings quality.

Statement of the Problem

There is a lack of consensus about the empirical validity of the conservatism theory. A large group of researchers believe in a positive and important relationship between conservatism and earnings quality while some others claim that there is no or a negative relation in between. This can be as the result of various factors such as legal limitations and tax incentives and etc. According to the aforementioned points, since there is not a consensus in this regard, and considering the point that conservatism has not received much attention as a criterion for the evaluation of earnings quality in Iran, the present study, in line with previous researchers' methods and to develop conservatism theory, tries to specify if there is a positive and significant relationship between conservatism and earnings quality in Iran's newfangled capital market or not.

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Significance of the Study

Reviewing the literature related to the researches about conservatism and earnings quality shows that there have been many separate studies done in each of these two areas, but it is very unlikely to find a study which examined both of them simultaneously. This is because there is a consensus that conservatism in accounting will increase earnings quality, but as it was mentioned in the statement of the problem, some researchers have drawn the conclusion that the excessive conservatism, although having a temporary effect on the earnings quality, will decrease the validity and relatedness of the earnings and profit in the long time. In other words, over-conservative policies have negative effect on earnings quality. As a result, providing some new evidence regarding the relationship between conservatism and earnings quality will interest investors, managers, legislators, and standard developers, and this point increases the significance of the study. The same point is the main stimulus for the present study as well.

Purpose of the Study

The purpose of the present study is to identify the literature and theoretical framework related to the conservatism and earnings quality in firms that have been accepted in Tehran's Securities Bourse.

Research Questions

According to the aforementioned points, the present study tries to find answers to the following questions:

1. Is there a significant relationship between conservatism and earnings quality?
2. Is there a significant difference in the earnings qualities of firms with high and low levels of conservatism?

Research Hypotheses

In order to answer the research questions, the following hypotheses have been introduced:

1. There is a significant relationship between conservatism index and earnings quality index.
2. There is a significant difference between earnings qualities of firms with high and low levels of conservatism.

Theoretical Framework and Literature

Definition of Variables of the Study

The term "earnings quality" does not have an important sense by itself. It is used with different interpretations and is a rather vague concept. There have been various definitions of earnings quality. The key definitions will be presented in this section. According to Revsine, et al. (1999), when earnings are stable, they will have high quality. As Michael, et al. (2002) state, earnings quality is a degree by which the previous income of the firm connects to its future liquidity. In a similar way of thinking, Hodij (2003) has defined earnings quality as a degree which presents the difference between the reported net profit and the real profit. According to Kirschenheiter and Melumad (2004), earnings with high quality are those earnings which contain further and more obvious information for the long-term value of the firm. Chan, et al. (2004) consider earnings quality as a degree in which the reported profit shows the main performance of the firm.

The dependent variable in this study is the index of earnings quality. As there is not a popular method in measuring the earnings quality, the present study tries to identify a criterion which is accepted by many researchers.

According to the realization of cash dividends in recent researches, earnings quality has had the most repetition. Therefore, this criterion is selected in the present study as an index for the evaluation of the earnings quality. The operating explanation of this variable is as follows:

Earnings quality: the proximity of the operating earnings to the operating cash flow is calculated according to the relation of OCF/OE. The greater relation we have, the closer earnings to the cash and the more earnings quality we will have, and vice versa.

$$Ieq = OCF/OE$$

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The independent variable in the present study is the conservatism index. Conservatism is a criterion for selecting the accounting principles and procedures in vague and unreliable conditions. At the time of facing unreliability, some methods should be chosen and administered that finally lead to the least possible amount of the retained earnings. In fact, in unreliable situations, the incomes and properties should be identified later and the expenses and debts should be recognized earlier. Selection and application of these conservative methods will be possible by accrual accounting. For example, recognition of the loss caused by the devaluation of stock only affects on accruals and does not have any impacts on cash flows. Givoly and Hayn (2000) presented a method for measuring the conservatism by using the accruals. According to this method, the continuous presence of the negative operating accruals, in a long period of time in firms, is considered as a criterion of conservatism. It means the more and negative average of operating accruals in the period, the more conservatism. Yet, the net accumulation rate of negative operating accruals represents a change in the degree of conservatism over time. Conservatism index of Givoly and Hayn (2000) is measured in the following way:

Conservatism index:

$(\text{operating profit} + \text{depreciation expense} - \text{cash flow from operations}) / (\text{total assets at beginning of the period}) \times (-1)$

The reason for selecting this model for measuring the conservatism of accounting includes the points that are presented:

1. The existing models for measuring the conservatism, including Basou, Penman, and Zhang model which are also used in some internal researches, face numerous errors in conservatism measurement.
2. The information of the model used in this research is based on accounting information, and market indices are not used in it. According to the accessibility to the financial statements, in order to measure the conservatism in financial statements, this model, compared to some other models, is more appropriate for the developing markets such as Iran's capital market.

Apart from earnings quality and conservatism index variables, all other variables are interfering variables which may affect the relationship between conservatism and earnings quality. In the present study, the interfering variables are controlled. From a theoretical viewpoint, big firms have probably more profit caused by repetitive and operational activities than other firms. Therefore, the effect of this variable is controlled. In this study, the firm's size is measured by the natural logarithm of its total assets.

Review of the Literature

Richard (2002) has studied the relationship between conservative accounting and earnings quality. In his study, he used Penman and Zhang's (2002) concept of earnings quality. Penman and Zhang define earnings quality according to a change in conservative accounting in a period of time. The main idea is that the difference between the reported net assets by the conservative accounting system and the reported net assets by the non-conservative accounting system is called as the reverse profit.

The degree of conservatism is defined as the ratio of the reverse profit to the operational net assets in a conservative accounting system. Earnings quality depends on the change in the degree of conservatism in a period of time. A key relationship which presents some important information about the prediction power of the recent profit is a relation between the growth rate of the reverse profit versus the growth rate of reported net assets in a conservative accounting system. If the two growth rates are equal or close to each other, the earnings quality will be high and the current period's profit will be predictable. On the other hand, the significant difference between the two growth rates causes low earnings quality.

Bern Stin, et al. (2001) concluded that the quality of earnings which are conservatively determined seems to be more, because, compared with non-conservative earnings, it is less likely to over-represented the prediction of the current and future performance. They also found that over-conservatism, although having temporary effect on earnings quality, will reduce earnings reliability and relatedness in long time.

Siegel (1982) has also found out that over-conservative policies have negative effect on earnings quality.

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Adham (2007), in his study about the relationship between earnings quality conservatism and stock returns, found that there is a direct and significant relationship between conservatism and earnings quality.

Saqafi and Sadidi (2008), in their study about the impact of conservatism on earnings quality and stock returns, found that selecting a conservative accounting method in a steady manner can change earnings quality through changing the investment in operational assets.

Hassas Yegane and Kazemi (2011), in a study about the evaluation of the impact of accounting method selection on earnings quality, concluded that the reported earnings quality is not affected by the utilized accounting methods.

Jabbarzadeh, et al. (2011) examined the relation between conservatism and managers' income smoothing. They concluded that bankrupt firms always try to affect their profit and loss figures through conservatism to achieve their goals.

METHODOLOGY

The present study is an empirical accounting study since it tries to find out about the relationship between conservatism and earnings quality. Therefore, it is also considered as a practical study. Additionally, this study is administered based on a post-event approach and is a correlative descriptive study. The methodology is based on a deductive - inductive framework, i.e. the theoretical framework and the review of the literature are administered inductively through library, articles, the present studies, and hypothesis testing.

Population of the study

In the present study, according to the nature of the study and the presence of some inconsistencies among the accepted firms in Tehran Securities Bourse, the following conditions have been considered to assign the population.

1. The firm should be accepted in the Bourse before 2006, and its stocks should be transacted from the beginning of that year.
2. There should not be any changes in the firm's fiscal year during the study.
3. The firm should not be one of investment companies and financial intermediates.
4. There should be enough accessibility to the financial statements and the accompanying descriptive notes as well.

Data Collection

For collecting the required information in the present study, recognizing the theoretical basis of the study, gaining information from the previous studies, and obtaining data about the literature, library studies and searching some websites related to the topic have been used. To gather the required data, the organizational documents existing in Tehran Securities Bourse have been utilized.

Data Analysis Procedures

In the present study, the measurement and analysis of statistical indices, especially the two important ones named as indices of central tendency and dispersion indices, have been administered through descriptive statistics. In addition, inferential statistics have been utilized for the data analysis, and the sample results have been generalized to the population and the required interpretation has been done. Excel Software has been used for calculation and measurement, and for the statistical analysis Eviews Software has been utilized.

Evaluation of the Correlation between Variables

In the present study, the relationship between variables is examined by using a correlation coefficient matrix. If there is an acceptable linear correlation, the regression model will be estimated. Since the variables are not normal, Spearman correlation coefficient has been used in order to examine whether the

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correlation exists or not. This coefficient uses data rank instead of real figures. The results of this test are shown in Table 1.

Table 1: Spearman Correlation Coefficient Test

	Earnings Quality	Conservatism	Firm Size	Debt Ratio
Earnings Quality	1 -			
Conservatism	0.5266 0.000**	1 -		
Firm Size	0.0324 0.374	-0.0751 0.039*	1 -	
Debt Ratio	-0.0421 0.048	0.2054 0.000**	-0.0370 0.310	1 -

* Significant in the level of 95%

** Significant in the level of 99%

According to the correlation coefficients and the relevant possibility between the paired variables of significant correlations (statistics possibility less than 5% of error), it can be observed that the correlation is sometimes positive and some other times negative as well; but this correlation does not lead to co-linearity (correlation less than 50%). Therefore, there is no problem in terms of co-linearity in the regression model analysis. This means that it is possible to analyze the study model in the presence of all descriptive variables at the same time.

Hypotheses Testing

The First Hypothesis Testing

In the first hypothesis of the present study, the relationship between conservatism and earnings quality is tested. In this regard, earnings quality is considered as the dependent variable, conservatism is seen as the independent variable, and firm size and debt ratio are observed as the possible influencing factors on controlled variables. The regression of combined data has been used to test this hypothesis. In these analyses, some cases such as the suitability of the combined model with the effects versus the integrated model without effects, the overall significance of the model, the significance of the coefficients of the descriptive variables of the model, independence of the residues of the model, normal distribution of the residues of the model, and the explanatory power of the model have been examined. The results of model analyses are shown in Table 2. As it can be seen, the relationships are represented in three models. In model (1), the relationship between conservatism and earnings quality is tested. In model (2), the impact of control variables on the relationship is also tested. Finally, in model (3), the significant variables of the previous models are reanalyzed. The results of the examination of the combined or integrated model showed that in models (1), (2), and (3), according to F-limer statistics and its possibility (statistics possibility less than 5% of error), the combined model will yield some suitable effects. Then in order to realize if the effects are constant or accidental, the results of Hossman and K2 statistics possibility (statistics possibility less than 5% of error) showed that using combined model will have suitable constant effects. F-fisher statistics and its possibility in models (1), (2), and (3) shows overall significance of the regression models (statistics possibility less than 5% of error). Dourbin-Wattson statistics in different models (1.5 to 2.5) represents the independence of the residues of the model. In other words, there is not a self-correlation between the residues of the models. Jarco-Bra statistics and its possibility showed that the models residues (statistics possibility less than 5% of error) do not have a normal distribution. This is in relation with the abnormality of the distribution of the main variables of the study.

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Table 2. Analysis Results of the relationship between conservatism and earnings quality

Dependent Variable: Earnings Quality						
Description		Model 1	Model 2	Model 3		
Explanatory Variables	Fixed Amount	Coefficient (T-statistics) (T-statistics Possibility)	0.959510 (14.73608) (0.0000)	1.112873 (0.773488) (0.4395)	2.199668 (5.929036) (0.0000)	
	Conservatism Index	Coefficient (T-statistics) (T-statistics Possibility)	4.607196 (7.565660) (0.000000)	4.899140 (8.356636) (0.000000)	4.88.628 (8.238784) (0.000000)	
	Firm Size	Coefficient (T-statistics) (T-statistics Possibility)		0.081874 (0.713382) (0.4759)		
	Debt Ratio	Coefficient (T-statistics) (T-statistics Possibility)		-1.830008 (-3.482068) (0.0005)	-1.827867 (-3.418497) (0.0007)	
	Overall Significance Examination	F-Fisher Statistics (Statistics Possibility)	2.515581 (0.000000)	2.687270 (0.000000)	2.707616 (0.000000)	
Explanatory Power Examination	Determination Coefficient (Adjusted)	0.355010 (0.213885)	0.375610 (0.235836)	0.375278 (0.236677)		
Waste Independence Examination	Dourbin-Wattson Statistics	2.043296	2.022912	2.022455		
Normal Waste Examination	Jarco-Bra (Statistics Possibility)	822.5012 (0.000000)	997.6623 (0.000000)	996.3167 (0.000000)		
Synthetic or Integrated Model Examination	F-Limer (Statistics Possibility)	1.645019 (0.0000)	1.704716 (0.0000)	1.722820 (0.0000)		
Fixed or Random Effect Model Examination	K2 Statistics (Statistics Possibility)	3.989722 (0.0458)	8.956672 (0.0299)	8.629789 (0.0134)		

Evidence from the analyses of different models according to T-statistics and its possibility shows the significance of conservatism index coefficient in earnings quality model (statistics possibility less than 5% of error). Since this is a sign of positive coefficient, the evidence shows a significant and positive relationship between conservatism and earnings quality. This means that as conservatism increases, earnings quality raises as well. From a theoretical viewpoint, this result agrees with the current theories. Approximately, the most common theory about what makes earnings with high quality is related to this point that investors consider the reported profit as something which is represented conservatively (conservatism theory).

Generally, in the first hypothesis of the present study, the relationship between conservatism and earnings quality has been examined. Evidence showed that there is a direct significant relationship between conservatism and earnings quality. This means that the first hypothesis of the study has been accepted. This result confirms the conservatism theory.

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The Second Hypothesis Testing

In the second hypothesis of the present study, the significant difference between earnings quality of the examined firms in the various levels of conservatism has been tested. To do so, at first step the conservatism index has been divided into two groups of upper and lower based on the median. Since the distribution of the observations related to earnings quality index variable is not normal, the comparison of firms' earnings quality in various levels of conservatism has been administered by using a non-parametric means equality test. This test utilizes the earnings quality measures rank instead of the real figures themselves. This test's results are shown in Table 3.

Table 3. Results of comparing earnings quality in various levels of conservatism

Conservatism Levels	Number	Ranks Mean
Up	368	491.1902
Down	385	267.8519
Z-statistics	14.08388	
Possibility	0.0000	

As it can be seen in the table, the results related to the comparison of ranks mean showed that the mean values of earnings quality in two different groups of firms based on various levels of conservatism according to Z-statistics and its possibility (statistics possibility less than 5% of error) are not equal and there is a significant difference between ranks mean. As a result, the second hypothesis of the study has been accepted. According to the results of this test it can be stated that earnings quality mean in those firms with more conservative approaches is more than those firms which follow a less conservative method. According to the evidence from the hypothesis testing, these results are in line with the results derived from the first hypothesis of the study.

DISCUSSION AND CONCLUSION

As mentioned before, the relationship between conservatism and earnings quality in the accepted firms in Tehran Securities Bourse has been examined in the present study. In the present study, the continuous presence of negative operational accruals in a long period of time in the firms is considered as a criterion of the conservatism. It means as operational accruals mean in the related period is negative and more, the conservatism will increase. In the first hypothesis of the study, the relationship between conservatism and earnings quality has been tested. The results of the testing of this hypothesis showed that there is a significant relationship between the conservatism and earnings quality of the sample firms. Because of the positive coefficient of the conservatism index of the model, the evidence showed that the conservatism has a positive significant impact on the development of the firms' earnings quality. In other words, as conservatism increases, the earnings quality of the firms will increase and vice versa. According to the results, the first hypothesis of the study has been accepted. In the second hypothesis of the present study, the significant difference between earnings quality of the examined firms in various levels of conservatism has been examined. The results of comparing the earnings quality means showed that the mean values of earnings quality in the two different groups of firms, according to different upper and lower levels of conservatism, are not equal and there is a significant difference between the means. As a result, the second hypothesis of the study has been accepted. Findings of the present study are in line with the findings of Adham (2007). His study's finding showed that there is a direct relationship between conservatism and earnings quality index. Moreover, the findings of this study are in line with the findings of the study of Saqafi and Sadidi (2008). Their study's findings demonstrated that, by selecting a steady conservative accounting method, a firm can change its earnings quality through making a change in investing on operational assets. Finally, this study's findings are not in line with that of Yeganeh and Kazemi (2009). Their study showed that the firm's reported earnings quality is not affected by the utilized accounting methods. Reviewing the literature about the relationship between the conservatism and earnings quality shows that the findings of the present study are to some extent in line with previous

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findings. The comparison of this study's result with the results of other studies is presented in the following table.

Suggestions

According to the findings of the present study, these suggestions are presented:

Suggestions based on the findings

The relationship between conservatism and earnings quality in the accepted firms in Tehran Securities Bourse has been examined in the present study. Findings of the study showed that there is a significant relationship between conservatism and earnings quality. In other words, as conservatism increases, the earnings quality of the firms will increase and vice versa. As a result and according to the findings of the present study, it can be stated that conservative actions in accounting and financial reporting can increase earnings quality and reduce the confliction between investors and managers. In other words, the firm can increase its earnings quality by selecting a steady conservative accounting method. Managers are always responsible for selecting and utilizing basic judgments and estimations as well as accounting principles. Therefore, they are responsible for earnings quality. Hence, according to the result of the first hypothesis, it is suggested to the firms' managers to adopt a conservative approach in recognizing the incomes and costs in order for the reported earnings to have a higher quality in terms of proximity to the cash. Additionally, according to the second hypothesis results, it is suggested to the capital market participants to focus on the observation of the conservatism as one of the important qualitative features of accounting, and to provide an appropriate administrative guarantee in order to perform conservatism in the financial reporting of the firms through Tehran Securities Bourse by applying new requirements. That is because the result of this hypothesis showed that those firms that have higher conservative indices will have higher earnings quality.

Suggestions for the further Studies

According to the importance of the quality of the accounting information, especially accounting profit, some more studies are needed to examine all influencing factors on earnings quality. The examination of the role and position of audit in providing high quality information can lead to a better understanding of earnings quality. Therefore it is suggested that the following point to be considered in future studies:

1. In the present study, the concept of earnings quality was presented based on the relationship between the profit, accruals and cash. In order to have further evaluation about the topic of the study, it is recommended to use some other concepts such as the concept of earnings quality based on time series of earnings features, the concept of earnings quality based on the qualitative features of the theoretical framework of the Financial Accounting Standards Board (FASB), and the concept of earnings quality based on the influence on decision.
2. There should be more studied done in future by observing related to the further periods by using the methodology of the present study in order to increase the validity and reliability of the results.

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