Studying the Relationship between Earning Quality and the Performance of the Firms Accepted in Tehran Stock Exchange

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**A B S T R A C T**

One of the most important functions of marketing is changing and gathering of all separated financial resources. As outcomes and economic events are unforeseen and unpredictable and there is no confidence about this issue, so decision which was made about this matter is not correct. Accordingly, investors have to get assured of the results and supply the point which can get and also it should follow science and information. Study about earning quality shows that researchers work hard about it. And it is due to report that benefit in an economic unit is deferent from real benefit, so we are researching about relationship between earning quality and performance of companies in Tehran Stock Exchange. Studies show that economic value added, asset efficiency and exchange efficiency into 64 companies which were chosen in Tehran Stock Exchange from 2006 to 2011. The method in this study is inductive-priori as testing principle theory of analysis regression panel. According to analysis in test results, it has been revealed that there is a significant relationship between earning quality and performance of companies.

**INTRODUCTION**

Statement of the problem: Accounting system follows certain purposes and the users evaluate the feedback of the given information so that they can find out their information content and gain a reliable basis for their decision making. The general purpose of financial reporting is providing the information which states transactions financial effects, financial events which are effective on financial conditions and the results of an economic unit operations and by doing so it assists investors, creditors and other users in judging about these issues. Investors, as capital providers, guarantee the business. They are interested in information about risk and their investment return so that they can make decision about purchasing, keeping or selling the shares and evaluate management performance and ability to pay the profit of the unit. Among all information which is presented accounting profit is considered as the most important source of accounting about future profitability and plays an important role in determining the value of the business.

**Significance of the study:**

Net income has different functions. The reported earning and the relations obtained from that is are usually used in reward and salary and borrowing contracts. Making decision about the contract which is based on low earning leads to unconscious transmission of capital. For example it has been revealed that extremely high earnings are considered as the criterion of performance evaluation and leads to allocating high amount of reward for the management. Likewise inflated earnings may hide the sudden bankruptcy of the firm which itself will lead to giving wrong credits from creditors. From investment viewpoint low quality of earning is not favored which shows risk in allocating resources to that part. Low earning quality has no effectiveness which leads to decreasing economic growth by allocating wrong capital and from the other hand, low earning quality leads to deviating resources from the plans with real return to the plans with unreal return which causes economic growth fall.

**Key words:**

Earning Quality, Company Operation, Return of Assets, Return on equity shareholder, Tehran Stock Exchange
The research goals:
One of the most important indexes for investors to make decision is paying attention to the firm earning. The accounting information which can help investors in this sense is among the relevant information for investment. Importance of accounting earning and investors' orientation based return and earning which states that investments are moved toward the industries with higher earning and lower risk, shows the significance of evaluating earning quality from financial users' viewpoint. In this research, regarding the status of earning quality in fairly allocating earning, earning quality and its effect on investors' decision making is studied. In fact the relationship between earning quality and firms performance is evaluated to present an appropriate and confident model for investors to make decision which will pave the way for investors' confidence in their investment.

In this research, through performance index of economic value added and earning quality by index of "the ratio of cash obtained from economic activities to operational earning" the performance of growth value firms is done to find out what relationship exists between earning quality and the performance of these firms.

Theoretical considerations of the research:
Operational conceptual definitions of the terms:
Earning quality:
It is an important factor for the firms to evaluate the business health. It is a multi-dimensional concept which has no unique meaning. Earning quality is related to the ability of the reported earning in reflecting the real earning of the firm. In addition, the earning quality shows stability and lack of fluctuation of the reported earning.

The operational definition of earning quality:
The close relationship between operational earning (OE) to operational activities cash flow (OCF) which is calculated as OCF/OE shows that the bigger this ratio the closer earning is to the cash flow and earning quality is higher and vice versa.

Operational earning:
Benefit or loss obtained from usual and continuous activities of business and this is calculated by the average number of the total assets of the firm that is by dividing the obtained earning of usual activities by the firm average assets. This number can be obtained from loss and benefit statement which is in financial statements of the firm [5].

Cash flow from operational activities:
In terms of the firm assets which is obtained by dividing the cash from the main and continuous activities which are producing operational earnings of the business by the assets average. This number will be subtracted from cash flow statement of the firms.

The firm performance:
The indexes of the firm performance can be divided by two groups: A) performance evaluation by accounting and financial information, B) performance evaluation by economic data.
In the first index, earning, earning growth, earning per share, dividends per share, and earning before interest and tax return of investment faced with some problems due to using accounting earning.
This earning can be changed because of the following cases:
1. The ways of evaluating of stocks
2. The ways of depreciation of fixed assets
3. The ways of encountering with capital costs
4. The ways of storing
5. The ways of consolidated goodwill depreciation

Economic value added:
Economic value added is an index of evaluating the performance which calculates the ways leading to increase or remove the values of the firms correctly. This index shows the remaining earning subtracting capital costs.
Economic value added is a simple performance index and presents a simple image of producing wealth for stock holders and helps managers with making investment decisions and realizing the chances for improvement and attention to the short-term advantages like long-term advantages.
Review of the related literature:

Vasheghani Farahani has investigated the relationship between earning quality and some of the strategic principles including board of directors members and separating the president of board of directors and general manager among the firms accepted in Tehran stock exchange. In this research 103 firms has been studied from 2005 to 2007. The selected approach for testing these hypotheses is using the mixed data. Because of non-normality of statistical distribution of the research variables, for the first hypothesis, Spearman correlation test and for the second hypothesis, mean comparison U-Manwitney test has been used and earning quality has been obtained by accruals index. The results of the research showed that at the confidence level of 95% there is no significant relationship between earning quality and board of directors members number and separating the president of board of directors and general manager.

Research methodology:

The current research is a descriptive research which seeks to describe the relationships between variables by using statistical tests. The research method is correlational, in terms of goal this is an applied research which seeks to find out the relationship between earning quality and growth and value firms performances and the results obtained from this research can be of high importance to a wide range of people including potential and real stock holders, authorities and managers of stock exchange market, researchers and students.

Data collection method:

Most of the data gathered with the library method to test the research statistical hypotheses. The instruments such as book, journals, and technical texts and searching in the data banks, etc… are used to have access to theoretical basics of the study and to use other researchers' experiences in the field of this research, to use the firms historical financial statements which are presented by the stock exchange organization and to gather data dealing with the research variables.

Statistical population, sampling method, sample size:

Statistical population consists of 465 active firms in Tehran stock exchange. After considering the following conditions, the required information was extracted from financial statements, auditing report, and explanatory notes and finally 64 firms qualified all necessary conditions and were selected.

1. They should be present from the beginning of financial year 1385 up to end of financial year of 1390.
2. To increase the comparability power, the end of financial year has been considered as Esfand 29th.
3. According to studying transactions and monthly average of stock price in the period from 1385 to 1390, their share should be at least transacted.
4. They shouldn't be among the investment, insurance, mediating, and holding.
5. During the given period, they shouldn't have changed financial year or their activity.
6. During the given period, they shouldn't be loss producer.
7. The financial statements and their explanatory notes should be accessible fully.

The research question:

Is there any relationship between the firms performance and earning quality?

The research hypothesis

To answer the research question, the following hypotheses are presented and studied:

The main hypothesis
There is a significant relationship between earning quality and the firms performance.

The peripheral hypotheses:

The first peripheral hypothesis: There is a significant relationship between earning quality and economic value added.

The second peripheral hypothesis: There is a significant relationship between earning quality and assets return.

The third peripheral hypothesis: There is a significant relationship between earning quality and stock holders' salary return.

Methods of data analysis:

To determine the relationship between earning quality and firms performance, attention to the type of relationship among variables, correlation tests are used to determine the relationship between variables. After approving the existence of the relationship, it is attempted to show that in what relationship earning quality is higher. To do so, variance analysis test is used for the three independent populations. To study earning quality in the firms, HOC tests such as LCD and Duncan are used. To test data normality, K-S test is used and to test fitting of the study, Jark Bera coefficients and Ahaic and Kubler liber indexes will be used. It is remarkable to say that in all situations, central indexes such as mode, median and mean and distribution indexes such as variance, deviation coefficient, tables and histograms are used for better estimation of probability. It is
remarkable to say that in all situations the confidence level is 95% and ($p$-value=5%). The gathered data is calculated and classified with the software Excel and is analyzed with the software SPSS.

**Data analysis:**

Analyzing the first peripheral hypothesis: the relationship between economic value added and earning quality

In this model, it is attempted to estimate the parameters of the following model:

$$\ln(y_{it}) = \alpha + \beta_1 \ln(x_{it}) + \epsilon_{it}$$

After fitting this model with the data of table (1) which consists of correlation coefficient, model determining coefficient, Fisher statistic, Durbin Watson statistic, and the obtained sig level and regarding the obtained correlation coefficient which 0.757, there is 0.757 linear relationship between growth firms performance and earning quality. The determining coefficient is 0.573 which shows good estimation of the model.

**Table 1**: regression to predict "earning quality" based on the firm performance according to the index of economic value added.

<table>
<thead>
<tr>
<th>$R^2$</th>
<th>$R$</th>
<th>Durbin Watson statistic</th>
<th>Sig level</th>
<th>$F$ value</th>
<th>Squares mean</th>
<th>Degree of freedom</th>
<th>Squares sum</th>
<th>$\text{Dourbin Watson Statistic}$</th>
<th>$RR^2$</th>
<th>Change source</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.57</td>
<td>0.757</td>
<td>1.8333</td>
<td>0.16</td>
<td>5.993</td>
<td>6.203</td>
<td>1</td>
<td>1035</td>
<td>85</td>
<td>87.89</td>
<td>Regression</td>
</tr>
</tbody>
</table>

Regarding the table, the obtained $F$ which is higher than the table $F$, and regression in the panel, it can be said that there is a positive and significant relationship between earning quality and growth firms performance at the $a:0.05$ In other words, it can be predicted that earning quality exists through firm performance based on the economic value added index.

Analyzing the second peripheral hypothesis: the relationship between earning quality and the firms assets return

In this model, it is attempted to estimate the parameters of the following model:

$$\ln(y_{it}) = \alpha + \beta_2 \ln(x_{it}) + \epsilon_{it}$$

After fitting this model with the data of table (2) which consists of correlation coefficient, model determining coefficient, Fisher statistic, Durbin Watson statistic, and the obtained sig level and regarding the obtained correlation coefficient which 0.591, there is 0.591 linear relationship between firms performance and earning quality. The determining coefficient is 0.349 which shows good estimation of the model.

**Table 2**: regression to predict "earning quality" based on the firm performance according to the index of firms assets return.

<table>
<thead>
<tr>
<th>$R^2$</th>
<th>$R$</th>
<th>Durbin Watson statistic</th>
<th>Sig level</th>
<th>$F$ statistic</th>
<th>Squares mean</th>
<th>Degree of freedom</th>
<th>Squares sum</th>
<th>$\text{Dourbin Watson Statistic}$</th>
<th>$RR^2$</th>
<th>Change source</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.349</td>
<td>0.591</td>
<td>1.758</td>
<td>0.0471</td>
<td>2.487</td>
<td>2.737</td>
<td>1</td>
<td>1.100</td>
<td>84</td>
<td>92.433</td>
<td>Regression</td>
</tr>
</tbody>
</table>

Regarding the table, the obtained $F$ which is higher than the table $F$, and regression in the panel, it can be said that there is a positive and significant relationship between earning quality and growth firms performance at the $a:0.05$ In other words, it can be predicted that earning quality exists in growth firms through firm performance based on the firms assets return index.

Analyzing the third peripheral hypothesis: the relationship between earning quality and the stock holders’ salary return

In this model, it is attempted to estimate the parameters of the following model:

$$\ln(y_{it}) = \alpha + \beta_3 \ln(x_{it}) + \epsilon_{it}$$

After fitting this model with the data of table (3) which consists of correlation coefficient, model determining coefficient, Fisher statistic, Durbin Watson statistic, and the obtained sig level and regarding the obtained correlation coefficient which 0.368, there is 0.368 linear relationship between firms performance and earning quality. The determining coefficient is 0.135 which shows good estimation of the model.

**Table 3**: regression to predict "earning quality" based on the firm performance according to the index of stock holders' salary return.

<table>
<thead>
<tr>
<th>$R^2$</th>
<th>$R$</th>
<th>Durbin Watson statistic</th>
<th>Sig level</th>
<th>$F$ statistic</th>
<th>Squares mean</th>
<th>Degree of freedom</th>
<th>Squares sum</th>
<th>$\text{Dourbin Watson Statistic}$</th>
<th>$RR^2$</th>
<th>Change source</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1354</td>
<td>0.368</td>
<td>1.857</td>
<td>0.32</td>
<td>4.953</td>
<td>5.435</td>
<td>1</td>
<td>1.103</td>
<td>84</td>
<td>92.735</td>
<td>Regression</td>
</tr>
</tbody>
</table>

Regarding the table, the obtained $F$ which is higher than the table $F$, and regression in the panel, it can be said that there is a positive and significant relationship between earning quality and growth firms performance at
the a:0.05 In other words, it can be predicted that earning quality exists in growth firms through firm performance based on the stock holders' salary return.

Conclusions:
To study the main hypothesis of the research which is the relationship between earning quality and firms performance, panel regression model has been used. The results revealed that there is a significant relationship between earning quality and firms performance.

To examine the relationship between earning quality and firms performance, it can be said that a significant relationship between earning quality and firms performance is observed at the level of a:0.05 In other words it can be predicted that firms exists through assets return according to earning quality. Assets return shows the firm ability to make earning dealing with the total investment. If a firm increases its investment but it can not increase its earning, return will decrease. Therefore, the size of investment by itself can't improve stock holders' conditions. Regarding the relationship between earning quality and assets return, this index can be used to predict earning quality.

To study the relationship between earning quality and stock holders' salary return by using multi-variable regression and panel analysis, it can be said that there is a positive relationship between earning quality and firms performance at the a:0.05 In other words it can be predicted that firms exists through stock holders' salary return according to earning quality. According to the financial theories the aim of the firm is multiplying the stock holders' wealth. The ratio of the stock holders' salary return is the best index to evaluate the firm success or lack of success and management. This ratio emphasizes that the return from income depends on the money invested by the stock holders. Based on the results of the research, as the relationship between earning quality and stock holders' salary return is positive, the financial statements users should pay special attention to it.

To examine the relationship between earning quality and economic value added by using multi-variable regression and panel analysis, it can be said that there is a positive relationship between earning quality and firms performance at the a:0.05 In other words it can be predicted that firms exists through economic value added according to earning quality.

Economic value added has been remained as one of the indexes of earning accounting performance which has been defined as operational earning after subtracting capital costs and actually is a mediated version of remaining earning with some changes on earning and capital. The supporters of this approach believe this index is the best index of performance. Because it as an index of evaluation has considered stock holders' chance cost and their time value and removes the deviation of accounting principles. Regarding this positive relationship between earning quality and economic value added, investors and creditors are suggested to use this index to use in evaluating the earning quality.

The research limitations:
Like other researches, this research is suffering from some limitations, the goal of expressing limitations of the research is not to cover the problems of the research, but to make the reader have a fair judgment over the research and analyze the results of the study with a realistic viewpoint. To mention limitations the following item can be mentioned:
Lack of access to information of all firms accepted in Tehran stock exchange
Suggestions based on the results of the research
Regarding the importance of accounting information especially accounting earning, doing other researches considering other aspects can cast light on this field. The followings are suggested:
1. Regarding the results of the first hypothesis and its results which is the significant relationship between earning quality and firms performance, stock exchange organization should provide a mechanism, with the goal of orienting capital to the profitable areas, so that the accepted firms earning quality can be evaluated and published based on the different indexes.
2. It is suggested that financial users and real and potential investors pay attention to the size of firms earning quality in investment portfolio packages and decision making.

REFERENCES


