



Special article

Analyzing the Relationship between Earning Quality and Real and Predicted Profit Deviation in the Listed Companies Tehran Stock Exchange

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Introduction:

Financial affairs have always been of top priority for individuals, companies, and governments. Each group has to deal with them somehow, aspiring to maximize its wealth. Therefore, the right and due decisions should be made. One kind of these decisions concerns investing. Of various methods of investing, one kind would be investing in other companies' stock. It is the earning per share, as one of the important indexes, which mainly determines whether its present shareholders should choose to keep or sell it. The potential shareholders too thus decide to buy shares of any company or to put their capital into other ventures. Therefore, the prospects of profit distribution among shareholders play a key role in investment decision-makings (Shabahang, 2004). Moreover, if people involved could be informed about the reliability of the profit, they would also be assisted in reaching better decisions (Stolowy & Bereton, 2004). Bearing the above-mentioned points in mind, the problem could be stated as being that accounting profit is the basis for determining share prices and shareholders' decision-makings in buying or selling them. Because the real profits belong to the past and not timeliness, shareholders and investors make use of predicted profits _ the companies permitted to trade on the stock exchange market in Iran have to present predicted earning per share, (Rahmani & Bakhtaki, 2006). However, if the predicted profit lack due accuracy, i.e. there being gross and unexpected differences between the real and predicted profit, share price would differ its real value, leading to lack of optimal transactions by the time of announcing the real profit, and dissatisfying the shareholders and investors. The more unexpected absolute value of a profit, the

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more intense share price fluctuations would be. And the more intense share price fluctuations, the shareholders being more worried and lower investment security of the stock exchange market, (Bamber, 1987). Goto has asserted that if the profits are less than the expected amount, the company will probably face decrease in share price (Goto, 1997). Therefore, the issue of financial reporting quality, in particular earning quality, arises for those who utilize the financial statements. Evaluating earning quality assists the financial statement users in judging current profit certainty and predicting future profits (Saghafi & Blue, 2009). The purpose of the present research is to suggest answers to these two questions: Is there a meaningful relation between earning quality and deviation of real profit and predicted profit? Do investors pay more attention to profit quality in reaction to profit deviation?

Background:

On the subject of this study there have been similar researches which will be briefly mentioned below:

Bamber in a study deals with investigating the relationship between unexpected profit, company size, and share transaction volume, concluding that there is a reverse relationship between the absolute value of unexpected profit and company size, i.e. the larger company size, the lower the absolute value of the unexpected profit. Pamper also concludes that there is a direct relationship between the absolute value of unexpected profit and share transaction volume. This means that the more the absolute value of unexpected profit, the larger will be the size of share transactions and vice versa, (Bamber, 1987).

Francis et al (2004) have concentrated on seven characteristics of profit in order to illustrate the various aspects of information quality consisting of accrual quality, persistence, predictability uniformity, relevance, timeliness and conservatism. They have evaluated the first four characteristics by using accounting information and the last three ones by using both accounting and market information. They found out that those characteristics evaluated on the basis of accounting information are more congruent with information quality hypotheses, (Francis et al, 2004).

Behn (2008) in his study has concluded that the companies which are audited by qualified auditors have acted rightly in profit predictions, whereas, those audited by auditors other than the five big auditing institutes show more deviation, (Behn, 2008).

Givoly et al (2008) have compared the quality of reported profits in three kinds of company: 1) private companies which have not issued any bonds publicly, 2) private companies which have issued their bonds publicly, and 3) Public companies which have issued their bonds publicly. The opportunistic behaviours of the managers in the above companies had been compared and evaluated, and the conclusion offered was that the managers in public companies are well-motivated in earning management, which lowers reliability and usefulness of financial reporting, (Givoly et al, 2008).

Saghafi and Kordestani (2004) in their study have concluded that investors in Tehran Stock Exchange do not pay attention to earning quality of companies in reacting to dividend changes and unexpected earning, (Saghafi & Cordestani, 2004).

Mashayekh and Esmaili (2006) have studied the relationship between earning quality and some aspects of corporate governance including the managerial share ownership percentage and the number of outsider directors. in 135 companies during the period of the years 2002-2004. Their chosen approach for testing the hypotheses was by employing combinational data. The regression of least integrated squares was their method in the study. Earning quality is defined as the extent of earning persistence meant that higher earning persistence. On the other hand, the lesser the accruals items leads to higher earning persistence and hence higher earning quality. Earning quality had been tested by using standard of accruals items separately. The results showed that within the 95% confidence level, there is no relationship between earning quality and managerial share ownership percentage and the number of outsider directors. However, non-linear relationship between accruals items and managerial share ownership percentage was found. Generally, testing the research hypotheses indicated that number of outsider directors and the managerial share ownership percentage _ which are regarded as mechanisms of corporate governance _ have no noticeable significance in upgrading the earning quality of the listed companies in stock exchange, (Mashayekh & Esmaeili, 2006).

Rahnamay Roodposhti (2007) has examined the role of earning quality in predicting the future profits. In that research the role of items and the ratio of operating cash flow to operating income has been examined as a earning quality index. The results indicated that there is a reverse relationship between accruals items and future profits, while there is a direct relationship between earning quality and future profits (Rahnamay Roodposhti, 2007).

Hoshi et al (2010) in a study titled “the effects of section 340 of auditing standards on quality of management earning forecasts .the results show that enforcement of section 340of auditing standards reduces the earning forecasts error and do not lead to change the stocks price.but it reduces number of revisions, (Hoshi et al, 2010).

Alavi-Tabari et al (2009) have investigated the relationship between earning quality and dividend. In order to measure earning quality, they had adopted, as independent variables, the four accruals items proposed in the Dechow and Dichev model, extraordinary items, restatement of the earning and Pearson’s correlation between current and next period operating income fir measuring earning quality as independent variable ,dividend, dividend yield and dividend changes as dependent variables. The statistical sample of their study has consisted of 85 firms listed companies in Tehran Stock Exchange for the five-year period of 2002-2006. The results show that, when restatement of the earning is used as measure of earning, firm with higher earning quality do not pay the dividend on time. ,when extraordinary items is used as measure of earning quality ,firm with higher earning quality tend to set more generous dividend policies and none of criteriaof earning quality doesn’t have any significant effect on dividend changes, (Alavi Tabari et al, 2009).

Profit Quality

This is a multi-dimensional concept and there is no definition of it accepted by consensus. Dechow and Dichev have introduced accruals items quality as a standard

for the earning stability and thus believe that the companies whose accruals items quality are higher enjoy more persistent profit, in other words, qualified earning (Dechow & Dichev, 2002).

Balsam et al, call a earning qualified which enjoys of high quality in accruals items and high reaction coefficient (Balsam et al, 2003). Ball and Shivakumar stated that qualified earning is a earning in which loss are recognized on time and reflected (Ball & Shivakumar, 2004). Defond et al, believe that earning with high quality means that earning can express economic events of the company (Defond et al, 2004). Richardson and Williams have indicated that qualified earning is persistent (Richardson et al, 2004; Williams, 2005). Mikail et al have based predictability of earnings as a standard for their definition stating that a qualified earning has less fluctuation and its predictability potential is more (Mikhail et al, 2003). Hermannz has regarded earning quality related to profitability persistence, which in his view means a firm's capability to keep its current profitability in long term (Hermanns, 2006). Another standard for measuring earning quality is the extent of dividend realization. On the basis of this measure approximation to cash means earning with higher quality. Simply, this relationship is expressed as operating cash flows to operating income. This measure has been emphasized upon by scholars like Penman and Zhang (2002), Harris et al (2000), Revisine (2002) and Richardson (2004).

From the investors' point of view of a low quality is displeasing because it implies lack of optimum appropriation of resources, (Saghafi & Blue, 2009). Moreover, earning with high quality supports development of capital market especially in developing countries. When the majority of the people do not trust the process of financial reporting or to the publicized financial information, change their minds in investing, which, in turn, hinders capital market development, (Saghafi & Blue, 2009).

Concept of real profit deviation and predicted profit:

Bal and Brown on the basis of their studies has suggested that real profit deviation and predicted profit should be calculated by two methods (Ball & Brown, 1968). The first one is making use of changes in profitability. If profits could be suitable substitutes for cash flows, this would prove the existence of a relationship between extraordinary internal rate of return and changes in cash flow. The second method is change in earning after putting aside change impact on the index of earning market. Change in the market profitability in period (t) can be measured from the following, in which (M_t) is profit market index for the period (t).

$$\Delta M_t = M_t - M_{t-1}$$

Bamber has calculated real profit deviation and predicted profit by the following Formula:

$$UE = \left| \frac{EPS - PEPS}{PEPS} \right|$$

UE = real profit deviation and predicted profit

ESP = earning per share

PEPS= predicted earning per share

It is this point of view which has been adopted in the present research,(Bamber, 1987).

Methodology:

In the present study the correlation method of linear regression analysis has been used for testing hypotheses. Regression analysis is a method for studying the contribution of one or several independent variables (X) in predicting dependent variable (Y). The test of being meaningful is a statistical pattern on which one hypothesis out of the two H_0 and H_1 is chosen with specific error. This error probability whose index is α 's significance level represents the probability on the basis of which the opposite hypothesis, H_1 , is chosen and the existence of a correlation is admitted. In this study a significance test of in the level of significance of $\alpha = 0.05$ has been used and for testing regression model coefficient method of variance analysis (ANOVA) has been employed. The basic idea of variance analysis is showing the total amount of dispersion of a statistical set as a collection of some phrases which could attribute each one to a specific source or cause of existence of dispersion. The index which is used for indicating total dispersion is the total of sum of squares.

The method of minimum squares chooses the best line out of all lines being drawable within data. The most common index fitting regression line is determining coefficient (R^2). R^2 explains and measures proportion or percentage of dependent coefficient changes by regression; therefore, it is an index of power of regression explainability.

Method of collecting data:

In the present study, through library resources, such as books, various kinds of journals and periodicals of research, educational, executive organizations, theses, dissertations, surfing on the Internet, and visiting Tehran Stock Exchange, theoretical issues and statistical information required by companies have been extracted and for reaching conclusions have been examined and analyzed and tested by SPSS statistical software.

Statistical population and samples

Statistical population of this study includes all listed companies permitted to operate in Tehran Stock Exchange. Statistical samples cover the companies which have all the conditions below:

- 1) Listed to Tehran Stock Exchange by the year 2004.
- 2) Their time period is calendar year.
- 3) They had not incurred losses during those financial years, and had submitted their budget ESP to the stock exchange.
- 4) They had not changed their type of activity during those years.
- 5) They are not banks or financial institutes (investment companies, holding companies, banks, and leasing). The reason is that they have activities of a totally different essence and income and expense of especial composition.

After considering the set of above conditions, 48 companies were chosen as sample for the time period of the years 2005-2008.

Findings of the study:

For testing the hypothesis of the study, data related to earning quality and deviation of real profit and predicted profits were considered and tested periodically for each year and also collectively for the test duration (2005-2008).

Hypothesis:

In regard to its objective, the hypothesis of the present research can be stated as:
There is a meaningful relationship between profit quality and real profit deviation and predicted profit.

H0: There is not a meaningful relationship between earning quality and deviation of real profit and predicted profit.

$$H_0 : \beta = 0$$

H1: There is a meaningful relationship between profit quality and deviation of real profit and predicted profit.

$$H_1 = \beta \neq 0$$

For testing this hypothesis the equation below is estimated:

$$|UE| = \alpha + \beta EQ + e$$

|UE|: absolute value of deviation of real profit and predicted one

α : Width from destination

β : slope of regression line

EQ: profit quality

e: error phrase

Results of the hypothesis have been presented in the tables below:

Table (1): Relationship between Earning Quality and Real and Predicted Profit Deviation in 2005

Amount			Sig.	F	Square Means of Error	Sum of Squares	df	Model
-0/05	β		0/901	0/016	0/001	0/001	1	Regression
0/223	α				0/043	1/965	46	Residual
0/000	R^2					1/965	47	Total

Table (2): Relationship between Earning Quality and Real and Predicted Profit Deviation in 2006

		Sig.	F	Mean Square	Sum of Squares	df	Model
02/0	β	652/0	2/0	0/01	0/01	1	Regression
042/0	α			05/0	317/2	46	Residual
004/0	R^2				317/2	47	Total

Table (3): Relationship between Earning Quality and Real and Predicted Profit Deviation in 2007

		Sig.	F	Mean	Sum of	df	Model
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031/0	β
094/0	α
022/0	R^2

		Square	Squares		
311/0	049/1	012/0	012/0	1	Regression
		011/0	522/1	46	Residual
			533/1	47	Total

Table (4): Relationship between Earning Quality and Real and Predicted Profit Deviation in 2008

02/0	β
107/0	α
011/0	R^2

Sig.	F	Mean Square	Sum of Squares	df	Model
48/0	508/0	009/0	009/0	1	Regression
		017/0	777/0	46	Residual
			786/0	47	Total

Table (5): Relationship between Earning Quality and Real and Predicted Profit Deviation in 2005-2008

03/0	β
131/0	α
014/0	R^2

Sig.	F	Mean Square	Sum of Squares	df	Model
42/0	661/0	006/0	006/0	1	Regression
		009/0	395/0	46	Residual
			401/0	47	Total

As the above tables show, determining coefficient (R^2) for each year and collectively are 0/000, 0/004, 0/022, 0/011, 0/014, showing that only a small section of deviation changes of real profit and predicted profit could be explained by earning quality. On the other hand, F statistic and related P-value rejects meaningful relationship at the confidence level of 95% for each year and during the years (2005-2008), in other words, the study hypothesis is being rejected in the case of all companies examined.

Conclusion:

The present study aimed to answer the question whether there could be a meaningful relationship between earning quality and real profit and predicted profit or not? To put it in other words, we were searching for a meaningful relationship between earning quality and deviation of real profit and predicted profit, so that investors could modify the predicted information by considering characteristics of earning quality of the company before using budget figures (especially, predicted profit), minimize investment risks, and prevent extraordinary share price fluctuations. To fulfil this aim, the research hypothesis was tested by employing the data of 48 active companies on Tehran Stock Exchange during the time period 2005-2008, the results of which are as follows:

Considering the results obtained from the research hypothesis it could be deduced that during the years 2005-2008 there have been no meaningful relationship at the confidence level of 95% between earning quality and deviation of real profit and predicted profit. Therefore, while deciding on buying or selling share, investors cannot

use the index of earning quality as an index which could predict the profit deviation in order to prevent their investment risks.

Suggestions:

- 1) Because real profit and predicted profit are mainly resulted from budget deviations and in the present study the majority of companies surveyed had real profit and predicted profit deviations, it is proposed that the Stock Exchange Organization should exert more supervision on company budgets, especially their announcement on ESPs. This supervising can take place by qualified accountants who are expert in industries in order to investigate predicted earning per share.
- 2) Guidelines should be provided for measuring and reporting predicted profit by a committee consisting of stock exchange representatives, Auditing Organization (standard-making authority), Official Accountants association of Iran, and university academics.
- 3) Because earning quality have various definitions, it is probable that by applying another definition of earning quality a relationship could be find between the two variables of the study.

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