

Investigating the relationship between reliability of financial information and company's profitability

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ABSTRACT

The purpose of this study is to investigate the relationship between financial information reliability and profitability of the company. This research is applied in terms of purpose and descriptive in terms of data collection, and the research design is post-event and retrospective. Also, according to the purpose of this study, the present study is a correlational study. The statistical population includes 513 companies listed on the Tehran Stock Exchange from 2004 to the beginning of 2019. In order to collect the desired data, the information contained in the financial statements provided to the Stock Exchange Organization¹, and other related information sources such as the new Rahavard Novin database have been used. Data analysis of this research and testing of its hypotheses were performed by Excel and EViews software and the hypothesis was examined through correlation analysis using multivariate regression method with a panel data approach. The results of examining the research hypothesis show that the coefficient of the variable square is the reliability of financial information is positive and significant. This means not rejecting the research hypothesis. More precisely, the results of examining this hypothesis show that when the reliability of financial information increases, the firm's performance responds to this change in a non-linear way and increases.

Keywords: financial information reliability, company's profitability, Tehran Stock Exchange

Introduction

Today, investors, creditors, managers and users of financial statements are looking for a timely and reliable indicator to measure shareholders wealth. Investors always tend to be aware of the success rate of managers in using their capital. Performance evaluation systems are useful tools for evaluating the performance of managers (Etemadi and Fathi, 2012). These evaluations are also important to governments, banks and financial-credit institutions, but this is most important for investors, because this group is not willing to invest in companies with high risk, so if everyone does this, more return will be expected for

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more value (Taghavi, 2002). Performance evaluation criteria are the basis for managers to calculate rewards for the growth and performance of the company. Because, they are used by internal and external users of financial statements. External users also benefit from these criteria to make investment, financing, and ... decisions (Aliabadi et al., 2013).

One of the most important goals of business enterprises is to make a profit in the short term and increase the economic wealth of owners in the long term. This is possible by making a rational decision in the investment process. Making rational decisions is directly related to evaluating the performance of the business enterprise, and evaluating the performance of business enterprises also requires recognizing the criteria and indicators that are classified into two sets of financial and non-financial indicators. Financial performance measurement criteria are preferable to non-financial criteria due to their characteristics such as quantity, practicality, objectivity and tangibility (Anvari Rostami et al., 2004). Most of the earnings management literature focuses on accrual-based earnings management. While few studies have been conducted on actual earnings management and its impact on business unit performance, several criteria have been proposed to evaluate business unit performance. None of these criteria alone can predict the financial performance of business units (Mahoney, 2011).

Users of corporate financial statements need quality financial information to make decisions in the field of purchasing, sales, evaluating the performance of managers and other important economic decisions. In general, investors invest in an economic unit when, first, they have enough information about it and, second, they trust that information. On the other hand, given that financial statements provide valuable information to outsourcing groups, a strong reliance on accounting figures, and especially profits, provides strong incentives for managers to manipulate profits for their own benefit. This causes users to access misinformation and make wrong decisions based on it (Aljafiri, 2007).

So far, several studies have been conducted on factors affecting performance, including the studies of Mahdavi, Behpour and Kazemnejad (2014), Abbasi and Sadeghi (2010) and Namazi, Hallaj and Ebrahimi (2009). The researchers found a positive relationship between disclosure quality, firm size, elements of intellectual capital (including physical capital, human capital and structural capital), institutional ownership, and corporate performance.

The study of the impact of earnings management based on the amount of information disclosure and actual financial performance has been done by Bazrafshan et al. (2016), but so far no research has been done to examine the impact of reliability on actual performance. According to the above explanations, the main issue of this research is to investigate the impact of financial information reliability and profitability of the company.

Theoretical foundations of research

Reliability of financial information

Reliable information is information that is free from important error and bias, and honestly represents what it claims to express or is reasonably expected to express. In other words, reliability is a qualitative feature related to the content of information. In other words, reliability is one of the qualitative characteristics related to the content of information and is also one of the components of the quality of disclosure. Reliability can be assessed using the following four quality criteria (Noravesh et al., 2014).

Honest expression: Information should honestly reflect the effect of transactions and other events they claim to be, or reasonably expected to be.

Content preference over form: If information is to be honest about the transactions and other events it claims to represent, it must be based on content and economic reality, not just their legal form.

Impartiality: The information contained in the financial statements must be impartial, i.e. free from bias.

Caution: is the use of a degree of care that is required in the exercise of judgment to make estimates in conditions of ambiguity so that incomes or assets are not presented more than actually they are and expenses or debts are not presented less than actually they are.

Completeness: The information contained in the financial statements should be complete with respect to the quality of importance and considerations related to the increase of benefits over the cost of preparation and presentation.

Auditors' comments are a measure of the reliability of a company's financial statements. In expressing the basic concepts of auditing, it reads: what the audit adds to the process of financial reporting of reported information is related to the quality of the information reported and the need for users to evaluate the quality of information before using them (Etemadi and Dianati Deilami, 2009). Active investors need timely and reliable information about the company to make effective investment decisions so that they can monitor management activities and participate in strategic management (Armstrong et al., 2010).

Researchers such as Skinner (1989) and Verrecchia (1983) have examined the consequences of delays in providing timely and reliable information, and their research has shown that poor disclosure of information in terms of timeliness and reliability reduces stock valuation and whenever an inappropriate delay occurs in the reporting of information, the information loses its relevance. The findings of Lang and Lundholm (1996) indicate that disclosure of quality information in companies will lead to more analysts' pursuit, more accurate forecasting of profits by different analysts, and less fluctuation in the revision of forecasts. In addition, the benefits of quality disclosure include greater investor engagement, reduced estimated risk, and reduced information asymmetry, each of which can reduce the cost of capital and thus improve performance. The results of the study of Jensen et al. (2006) indicate that companies with lower quality of disclosure have better future performance than other companies in the industry. Chi (2009) examined the effect of disclosure quality on the performance of Taiwanese companies. Research findings indicate that there is a direct and significant relationship between disclosure quality and firm performance. It is very difficult to examine the relevance and reliability of accounting information separately; because relevance versus reliance are conflicting criteria, and in the theoretical concepts of financial reporting, the amount of relevance or reliability of information to meet these criteria is not determined; in other words, these two criteria are not quantitative and their examination depends on individual judgment. In fact, information that has these two characteristics will be more useful in decision making (Barth et al., 2001).

Constraints imposed by cost and importance increase the relevance and reliability of information and make information a good commodity in decision making. Although ideally choosing an accounting method should provide information that is more relevant and reliable, one quality may need to be sacrificed for another. In other words, there is sometimes a conflict between the two qualitative characteristics of the relevance and reliability of information. That is, by increasing one, the other decreases. For example, the use of cost is valuable because it is reliable. While the relevance of the cost decreases over time (Saad et al., 2009).

Profitability

Existing earnings management studies have generally focused on accruals. Accruals are derived from the difference between earnings and cash from operations, which include depreciation, changes in current assets and liabilities other than cash (such as accounts receivable, inventory and accounts payables). As a result, assuming that cash flow is not manipulated, the only remaining way to manipulate earnings is to increase or decrease accruals (Mashayekhi and Safari, 2006). Earnings management through optional accruals is also one of the ways to manipulate earnings that is done through the selection of accounting methods and accounting estimates. The main problem is that optional accruals cannot be directly observed (Nazemi Ardakani, 2009). The main motivation of managers to manipulate accounting profits is to increase their current remuneration, job security, lawlessness, avoid reporting losses and reducing profits, debt contracts, increasing wealth, meeting shareholders' expectations and anticipated plans (Baharmoghaddam, 2006; Meshki and Nordideh, 2012).

Singhvi and Desai (1971) believe that profitability is a measure of good management. The management of a profitable company provides detailed and better information in order to describe its ability to maximize shareholder wealth and support its positions and rewards. In return, when profitability is low, managers feel threatened and may disclose less information in order to hide the causes of losses or reduce profits (Richard, 1992). Watts and Zimmerman (1986) argue that companies with higher profitability are more exposed to

the law and, therefore, are more likely to disclose details of information in their annual reports to justify their financial performance and reduce political costs. According to the theory of political processes, more profitable companies are interested in disclosing more and better information to justify the level of profit (Setayesh and Kazemnejad, 2012). Alzoubi (2016) studied in a study the effect of disclosure quality on earnings management in the Jordanian stock market. His research findings show that the higher the quality level of disclosure, the less managerial manipulation through accrual activities for earnings management, which in turn reduces the quality of financial reporting.

Research Methods

In terms of purpose, this research is of an applied type and in terms of data collection, it is descriptive and research design is post-event and retrospective. Also, according to the purpose of this research, the present study is of a correlational type.

The following models are used to test the research hypothesis:

$$PROFIT_{it+1} = \beta_0 + \beta_1 RELI_{it} + \beta_2 RELI_{it}^2 + \sum \vartheta_j controls_{it} + \varepsilon_{it+1}$$

Where, PROFIT is the company's profitability (ratio of operating profit to assets at the beginning of the period), RELI is the reliability of financial information (logarithm of reliability scores extracted from the Codal site). In addition, the phrase $\sum \vartheta_j controls_{it}$ refers to 6 variables of size of the company $SIZE_{it}$ (logarithm of total assets in the base 10), company growth opportunities BTM_{it} (ratio of book value to market value of the company), competition in the product market $QTOBIN_{it}$ (The ratio of total book value of liabilities and stock market value to book value of assets), asset compactness $TANG_{it}$ (ratio of tangible fixed assets to total assets), effective tax rate $TAXR_{it}$ (ratio of tax on profits, before taxes) and liquidity of assets LIQ_{it} (ratio of current assets to current liabilities), that following Flannery and Rangan (2006), Aztekin and Flannery (2012) and Setayesh and Kargarfard Jahromi (2011) are included in the model. In the model, the significance of the β_2 coefficient indicates that the research hypothesis is not rejected.

The statistical population of this study is all companies listed on the Tehran Stock Exchange from 2004 to the beginning of 2019 (513 companies, 7695 years-companies). To determine the statistical sample by systematic elimination method, the following conditions have been considered:

First, companies whose financial year does not end on 29 or 30 March are eliminated (155 companies, 2325 years-companies). Then, banks and financial institutions and financial investment companies (due to the different nature of their activities from other business units) are eliminated (96 companies, 1440 years-company). Companies whose book value of equity was negative have been eliminated (66 companies and 990). At the end, irrelevant observations (first percentile and 99th percentile of all observations) as well as all companies whose data were not available for calculating research variables were excluded (59 companies, 885 years-company). By applying the above conditions, 137 companies (equivalent to 2055 years-companies) have been selected to estimate the models and test of the research hypotheses. Table (1) shows the number and percentage of companies related to each of the studied industries.

Table 1: Number of companies in each industry

Row	Industry title	Number of companies	Number of years - company
1	Extraction of metal ores and coal	8	120
2	Real Estate Construction	7	105
3	Transport, Warehousing and Communications	8	120
4	Automobiles and Spare Parts	8	120
5	pharmaceutical products	9	135
6	Electrical and Computer Devices	8	120
7	Other non-metallic mineral products, tiles, and ceramics	9	135
8	Cement, lime and gypsum	7	105
9	Chemical products	9	135
10	Food products, sugar	8	120
11	Petroleum products, coke and nuclear fuel	8	120
12	Basic metals	7	105
13	Rubber and Plastics	8	120
14	Equipment and machinery	8	120
15	Metal products	8	120
16	Textiles	8	120
17	Other Industries	9	135
Total	-	137	2055

In order to collect the desired data from the information contained in the financial statements provided to the Stock Exchange Organization, and other related information sources such as Rahavard Novin database have been used. Data analysis of this study and test of its assumptions will be performed by Excel and EViews softwares, so that the information provided by the databases is first classified and sorted in Excel software and then transferred to EViews software to perform the desired statistical tests. To test the hypothesis of this research and determine the effect of independent variables on the dependent variable from the econometric model was used and the relevant hypothesis was used through correlation analysis using multivariate regression method with a panel data approach.

Findings

The data obtained from the present study includes combined data. The data required to test the hypotheses were extracted from Rahavard Novin software as well as the financial statements of the companies. After preparing the data in Excel software, the analysis and testing of hypotheses were performed by Eviews9.5 statistical software. Statistical test was performed at a significance level of 1%.

Descriptive statistics related to research variables are presented in Table (2). These statistics provide an overview of the status of research data distribution. The presented results show that the average (middle) of the company's profitability variables is 0.18 (0.17), disclosure reliability is 1.74 (1.79), company size is 5.81 (5.76), growth opportunities are 0.52 (0.45), competition in the product market is 1.61 (1.45), asset density is 0.24 (0.20), effective tax rate is 0.14 (0.15) and asset liquidity is 1.29 (1.21).

Table 2: Descriptive statistics of the research

symbols	Variables	Average	Middle	Maximum	Minimum	Standard deviation
PROFIT	Company profitability	0.18	0.17	0.78	-0.10	0.11
RELI	Disclosure reliability	1.74	1.79	1.98	1.11	0.19
SIZE	size of the company	5.81	5.76	7.28	4.66	0.54
BTM	Growth opportunities	0.52	0.45	1.44	0.10	0.30
QTOBIN	Product market competition	1.61	1.45	3.87	0.88	0.60
TANG	Compactness of assets	0.24	0.20	0.72	0.01	0.17
TAXR	Effective tax rate	0.14	0.15	0.24	0.00	0.07
LIQ	Liquidity of assets	1.29	1.21	3.39	0.41	0.48

In addition, the presented results show that the maximum (minimum) variables of the company's profitability are 0.78 (-0.10), the reliability of disclosure is 1.99 (1.15), the size of the company is 7.28 (4.66), Growth opportunities is 1.44 (0.10), competition in the product market is 3.87 (0.88), asset density is 0.72 (0.01), effective tax rate is 0.24 (0.00) and asset liquidity is 3.39 (0.41).

The results show that the company's profit is equal to 18% of assets, current assets are about 1.29 times current liabilities, book average value of shares is equal to 0.52% of the stock market value and tangible fixed assets constitute about 24% of total corporate assets. The scatter of observations of research variables is presented in the last column of Table (2).

To test the research hypothesis, the model is estimated with the combined data approach and the results are presented in Table (3). The significance of Limer statistics (22.49) indicates the preference of the fixed effects model over the common (constrained) effects model. In addition, the significance of Hausmann statistics (27.42) shows that using a fixed effects model is preferable to using a random effects model.

Table 3: Model Estimation Results (3-3)

$$PROFIT_{it+1} = \beta_0 + \beta_1 RELI_{it} + \beta_2 RELI_{it}^2 + \sum \vartheta_j controls_{it} + \varepsilon_{it+1}$$

Variable	Coefficient	t. Student	Significance	VIF
y-intercept	-0.18	-3.64	0.00	---
RELI	-0.13	-1.21	0.23	4.78
RELI ²	0.03	2.68	0.01	4.86
SIZE	0.03	4.81	0.00	1.04
BTM	-0.07	-6.65	0.00	1.51
QTOBIN	0.08	12.15	0.00	1.50
TANG	-0.01	-0.51	0.61	1.06
TAXR	0.18	3.19	0.00	1.05
LIQ	0.02	3.46	0.00	1.08
Adjusted coefficient of determination	47.23%		Limer statistics (significance)	(0.00) 22.49
Fisher Statistics (Significance)	(0.00) 102.08		Hausmann Statistics	(0.00) 27.42
Watson Camera Statistics	1.84		Fixed effects pattern	

The presented results indicate that the y-intercept (-0.18) and the coefficient of square variables of disclosure reliability (0.03), company size (0.03), growth opportunities (-0.07), product market competition (0.08), effective tax rate (0.18) and liquidity of assets (0.02) are significant at the level of 1%. The value of variance inflation index also shows that the independent variables of the model do not have a strong and intense alignment problem with each other. The significance of Fisher statistic (102.08) at the level of 1%

indicates the overall significance of the model. To avoid the problem of variance heterogeneity, the model is estimated using the generalized least squares approach. The value of Watson Camera Statistics (1.84) indicates the absence of the first-order serial autocorrelation problem in the disruptive components of the model has been estimated. The adjusted coefficient of determination also shows that the independent variables together explain about 47% of the dependent variable changes. The significance of the square variable coefficient of disclosure reliability (0.03) indicates that the relationship between disclosure reliability and company profitability is nonlinear. This shows that the research hypothesis has not been rejected.

Conclusion

The purpose of this study is to investigate the relationship between financial information reliability and profitability of the company. In the financial and accounting literature, accounting profit can be used in many ways. One of the uses of profit number is its use as a measure of company performance. Earnings management can have a huge impact on the number of reported profits. Managers can influence the amount of reported earnings by manipulating the non-cash accounting dividend (accruals). Cornett et al. (2007), state that the huge flood of corporate scandals in recent years has challenged the role of corporate governance in effectively monitoring the decisions of managers and corporate performance. Correcting such a situation requires increasing effective oversight of companies' performance and decisions made by their managers. With the separation of ownership from management and the creation of conflicts of interest, evaluating and measuring the actual performance of companies has become one of the most important financial issues. Lack of evaluation and control of companies' performance leads to lack of optimal allocation of resources, which causes losses to owners (shareholders) and ultimately the community economy at the macro level. Ansari and Karimi (2009) state that defining and operating the concept of company performance is a complex matter and different metrics are usually used to do it. Billings and Capie (2009) state that one of the most important factors for sustainable development in any country's economy is to provide the basic infrastructure for attracting domestic and foreign investments. This is possible despite a healthy competitive environment through transparent and timely information and the possibility of access to transparent information for all market participants. Hasas Yeganeh and Kheirollahi (2008) state that the more and better the release of information in societies, the greater the possibility of making informed decisions and taking responsibility for how to acquire and use resources; therefore, one of the requirements for economic growth and development is access to transparent information for all stakeholders. Moradi and Poor Hosseini (2009) do not consider it possible to make sensible economic decisions and optimally allocate limited and scarce resources to superior activities without timely, reliable and valid information. Previous research has shown that the better companies perform, the more timely their reports will be. Therefore the importance of corporate performance increases as the timeliness of corporate financial reporting increases.

In the research hypothesis, it is predicted that there is a non-linear relationship between financial information reliability and the company's profitability. The results of the research hypothesis show that the coefficient of the variable financial information reliability is positive and significant. This means not rejecting the research hypothesis. In other words, the results of examining this hypothesis show that when the reliability of financial information increases, the firm's performance responds positively to this change and increases.

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