AN OVERVIEW ON EFFECT OF AUDIT QUALITY WITH ACCURACY ON PREDICTED PROFITS

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Abstract: *Financial statements are considered as the most important financial information. Role of auditor in reliance on financial information must be taken into account. Indeed, audit has a key role in evaluating quality of information for users. The present research intends to examine effect of audit quality and family ownership with accuracy on predicted profits during 2008-2013 among the companies listed in Tehran stock exchange. In this study, the information of the statements released by the companies in sample group was used and seasonal information was used for data collection. Studying the relationship between two variables using regression and correlation via software EVIEWS and SPSS has been considered as the research method in the present research. Results of research indicated that there is a negative significant relationship between audit quality and predicted profit at error level (1%) with coefficient (–3.338), f-statistics (11.098) and adjusted determination coefficient (0.020).*

Keywords: *Audit quality, deviation from the predicted profit.*

INTRODUCTION

Increasing expansion of economic enterprises, development of information technology and conflict of interests raise regulatory requirements. Both globalization of the economy and information revolution have taken control of governments. These conditions have caused rise of progress in audit so as not to remain behind and move concurrent with changes in technology in line with the requirements within the society (Saghafi & Talaneh, 2006, pp. 34-44). In this environment, users require different information including financial information on economic enterprises for decision making. Financial statements are considered as the most important series of financial information. Yet, the most suspicious problem is about reliability of information which derives from conflict of interests. In addition to conflict of interests, other problems such as lack of direct access of users to information have caused demand for audit services. Indeed, audit has a key role in evaluating quality of information for user (Naderi Nor Eini, 2010).

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Historically, role of auditor in reporting financial statements has restricted to evaluating representation of financial status and results of operations. Managers are responsible for reporting financial status and results of operations in business enterprise, yet the auditor is responsible for measuring management declarations and releasing an impartial report on fair degree of financial statements with predetermined criteria, so that type of auditor's comment on confirming or rejecting these reports is of great importance in decision making and transparency of information.

The current and future investors make decision based on prospect of company from financial statements and other existing information. Intra-organizational financial statements are prepared based on continuity of activity, that is, the business enterprise continues its activity to an infinite extent (Hasas Yeganeh & Azin far, 2010). If continuity of activity does not come to realize, assets and debts of company must be reported during settlement for collection or payment. However expansion of information sources including internet websites and so forth has reduced relevance of financial reports released by companies, most of users believe that financial reports released by companies play a major role in their decision making. Hence, the present research intends to examine effect of audit quality with accuracy on predicted profits during 2008-2013 among the companies listed in Tehran stock exchange.

THEORETICAL BACKGROUND

Dependent Variable

Accuracy in earnings per share

Dividends have been an important component of total return; since the predicted profit is one of the important elements in calculating the expected return in investments, taking accuracy in predicting profit and detecting effective factors in deviation of profit is of great importance. It might search the most important effective factors in stock price in predicting earnings per share. The most important information source for investors, creditors and other users of information of firms can be predictions for the profit proposed by them at certain period of time (Saghafi & Talaneh, 2006, pp. 3-34; Alavi Tabari & Jalili, 2006, pp. 119-134). There are a variety of methods to predict profit, which prediction by managers and predictions based on time series models are accounted as the most important prediction methods. Since a majority of investors have no information on access to time series models and rely on the predictions of profit by managers, accuracy in prediction by managers can be of great importance (Frankel R, McNichols M. 1995, 135, 150).

Independent Variable

Audit quality

Audit quality implies reputation and professional care of auditor. As a result, auditor's reputation increases validity of financial statements and auditor's professional cares increase quality of information in financial statements (Nonahal Nahr et al. 2010, pp. 55-70). A common definition for audit quality implies measurement and evaluation of market from auditor's ability in discovering important deviations and reporting discovered deviations. Hence, with regard to the definition, audit quality implies increasing the audit ability in discovering accounting deviations and evaluating the ability and independence of auditor by market. Yet, it must make a differentiation between concepts of real quality of auditor and audit quality, because real quality of auditor is unobservable remaining without evaluation unless the results come out of audit. Although Accounting and Corporate Regulatory Authority put an emphasis on this point that audit quality does not rely on size of enterprise, many people claim that large enterprises than small enterprises develop more quality in audit.

LITERATURE REVIEW

Hutagaol Y, Siauw F. (2014) investigated the determinants of forecasted error published by the management in the IPO prospectuses. They observed six possible determinants that affect the absolute forecast errors (AFE). Furthermore, they also examined whether the earning forecast errors could explain the IPO stylish underpricing phenomenon. A sample of 124 IPO firms that went public in Indonesian Stock Exchange (prior Jakarta Stock Exchange) during the 1997–2005 period, was attended in the research. The results show that the research models proposed are valid models. This study also found that the AFE is positively related to the IPO underpricing, suggesting that the higher the forecast errors, the more underpriced is the IPO. Moreover, it is also found that market condition also influences the underpricing level in Indonesian IPO market.

Elton E. J, Gruber M. J. (2013) in a study "Earnings Estimates and the Accuracy of Expectational Data" compared accuracy in prediction by analysts with the accuracy in prediction by time series models and concluded that prediction by analysts is more accurate than prediction by time series models, whereby these results have been inconsistent with findings by Michael & Cragg.

RESEARCH METHOD

The present research is an applied research in sake of aim. In addition, it is a quasi-experimental and descriptive research. Further, since the information of the past has been used to calculate the variables in this research, this research is considered

as a prospective research. In this research, to describe the research variables, central indices including mean and median and dispersion indices including standard deviation are used. using unit root tests to verify the stationary of the variables, White test is used to detect inconsistency variance and Durbin-Watson and Breusch- Pagan- Godfrey tests are used for problem in autocorrelation of residuals. Then, using Leymer test, it can specify that there is a personal difference or inhomogeneity in the sections. Hausman test is used to detect random or fixed difference in sectional units. In following, estimation research model and obtained results will be analyzed. Further, t-test is used to test the second hypothesis. Software Excel was used to analyze the collected data and the regression model via software Eviews and SPSS was used to test hypotheses.

RESEARCH HYPOTHESIS

There is a significant relationship between audit quality and extent of deviation in predicted profit.

OPERATING DEFINITIONS FOR RESEARCH VARIABLES

Dependant Variable

Prediction of profit

Predictions by managers about profit can affect company value and cause increase or decrease in stock price within stock exchange. The accuracy in the predictions taken by manager relies on degree of conservatism. Regression is used to predict profit. Through overview of data of four years ago, it can predict through use of regression. Firstly, data of profit for the period of time must be predicted and then put in the regression pattern so as to specify the error level. In other words, the error level in prediction of profit indicates the difference between proper prediction and improper prediction. When data of four periods ago are examined, the profit is calculated via the formula below. Then, the predicted profit is compared with real profit, and the error level for prediction of profit is acquired. Accuracy in the earning per share is obtained from division of net profit of company to the number of shares of company (Bahram far & Mehrani, 2004, pp. 26-47).

Independent Variable

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EMPIRICAL RESULTS

Descriptive statistics

Studying descriptive results of research variables indicate that mean of dependant variable (accuracy in earning per share) equals to 0.069 in the present research. Further, mean of quality of auditing equals to 48392.311. Further, studying results of skweness coefficients for the research variables indicates that the variables of accuracy in earning per share and quality of auditing have a negative skewness coefficient, indicating that these variables have a left skewness to the normal curve. Further, kurtosis coefficient of the research variables indicates that the research variables have a positive kurtosis. Distribution of data of the variables under study is longer than the normal curve.

Table 1
Results of Descriptive Statistics of Research Variables

	Accuracy in earning per share	*Quality of auditing*
Mean	0.069	48392.311
Standard deviation	0.004	1265113.817
Skewness	–0.856	–4.094
Kurtosis	1.120	83.149
Minimum	0.055	7579718.000
Maximum	0.082	7579718.000

DEFAULT REGRESSION TESTS

Stationary Test

Studying stationary of variables is the first step in analysis of dynamic patterns, because non-stationary time series result in false regression. Hence, with regard to cointegration theory in modern econometrics, it requires taking step for stationary or non-stationary variables. Stationary or non-stationery time series can have a serious effect on behavior and features of variables, so that the variables must be stationary to avoid false regression, otherwise difference of variables which are stationary must be used. For this, to ensure insecure results, the stationary feature was examined *via* Im-Pesaran-Shin unit-root test. This test has been used for this reason that the companies listed in Tehran stock exchange have been examined, mentioned that each company is independent from another company. Im-Pesaran-Shin unit-root test has been used under this assumption that the self-explanatory coefficient changes between sectional samples. In this test, null hypothesis is based on existence of unit root and alternative hypothesis of stationary of a member of panel.

$H_0 : \theta = 0$ unit root exists and the variable is non-stationary

$H_0 : \theta = 0$ unit root does not and the variable is stationary

Table 2
Results of Unit Root Test

Variable	Statistics	Sig	No of company	No of year of company
650	130	0.000	14.189–	Accuracy in earnings per share
650	130	0.000	20.060–	Audit quality

The results from unit root test indicated that the statistics of the probability for test has been under statistics of the probability at confidence level 90%, 95% and 99%, thus null hypothesis is rejected and alternative hypothesis is confirmed. Hence, all the stationary variables are at $I(0)$ rank, found without problem of false regression.

CONSTANT ANALYSIS OF VARIANCE OF RESIDUALS

The assumption under constant variance of error term is another presumption in fitness of regression model. If the error variance has not the constant term, it will be called inconsistency variance.

White test is one of the tests to detect inconsistency of variance which is deemed to know whether the variance of error term is constant or not. indeed, in advance, it must test status of variance of error term. Hence, the hypothesis below is proposed to know whether the variance is constant or not.

$H_0 : a_i = 0$ variance of error is constant

$H_1 : a_i \neq 0$ variance of error is not constant

Table 3
Results of Inconsistency Variance Test

Model	White test	Value	Sig	Result of test	Status
The first hypothesis	f-statistics	0.484	0.617	Accepting H_0	lack of variance inconsistency
	Determination coefficient	0.972	0.615	Accepting H_0	lack of variance inconsistency

Studying results from variance inconsistency test indicates that significance level of f-statistics is not significant at error level (5%); in other words, values of *f*-statistics from the model is under the values of statistics in table. Hence, H_0 concerning consistency of variance of error terms is confirmed, whereby it can argue that the data enjoy consistency.

SERIAL AUTOCORRELATION TEST FOR RESIDUAL TERMS

In econometric studies which are based on time series, the assumption under lack of serial autocorrelation between error terms is negated, thus it requires examining the serial autocorrelation between the error terms before interpretation of results, because OLS estimators will be no longer efficient among all estimators without bias under serial autocorrelation between error terms, that is, they lack minimum variance, whereby statistical inference will not be reliable. For this purpose, the Breusch-Pagan-Godfrey test is used. Therefore, the hypothesis below is developed.

$$H_0 : \text{Lack of autocorrelation}$$

$$H_1 : \text{Autocorrelation}$$

Table 4
Results of serial autocorrelation test

Model	Breusch-Pagan-Godfrey Test	Value	Sig	Result of test	Status
The first hypothesis	*f*-statistics	2.589	0.076	accepting H_0	Lack of serial autocorrelation
	Determination coefficient	5.167	0.076	Accepting H_0	Lack of serial autocorrelation

The results from serial autocorrelation test for error terms indicate that the probability values pertaining to *f*-statistics are greater than 5% at confidence level (95%) or the values of *f*-statistics are under the values in statistics shown in table, thus the hypothesis based on the first-order serial autocorrelation has been accepted, mentioned that the error terms in the model lack serial autocorrelation.

STUDYING THE MODEL *VIA* COMPOSITIONAL DATA METHOD

A majority of researchers agree on increase of power of tests and reliability of the results from test by increasing size of sample group. The major problem in the context of collection of long-term time series data lies on this fact that such thing is not possible for the researcher in underdeveloped countries. On the other hand, results of tests will be found with biases in the countries in which such thing is not possible. Therefore, it requires using panel patterns which are obtained through combining time series data in different groups to examine power of tests. This resolves the problem under shortage of observations and avoids the probability for being affected by structural changes and failures. Panel data have numerous advantages than time series data. Increase of trust on estimations, elaboration of more advanced models and reduction of collinearity problem between variables have been mentioned as the most important advantages of this method.

FIXED-EFFECTS (LEYMER) TEST

In the present research, compositional data have been used to analyze model. For this, several companies are examined and analyzed over the time. In the section represented with compositional data, it must specify whether personal difference exists in sections or not?; for this estimation, the statistical data must be accumulated and estimated via pool data and panel data so as to select a suitable method. It can specify heterogeneity between sections via Leymer test. The null hypothesis for f-statistics is based on homogeneity of sections. If the null hypothesis is rejected, the alternative hypothesis concerning heterogeneity between sections will be accepted, i.e. if the calculated F-value in Leymer test is under the F-value in table, panel data will be used.

$$H_0 : \text{Homogeneity between sections}$$

$$H_1 : \text{Heterogeneity between sections}$$

Table 5
Results of Fixed Effects Test

Null hypothesis	Model	f-statistics	Freedom degree	Sig	Result of test	Selected model
Width of origin of all the sections is the same	the first hypothesis	1.390	(369128)	0.0009	rejecting H_0	panel

Results of Leymer test are observed in table 5. Studying results of table indicates rejecting null hypothesis and heterogeneity of sections at 5% level. Therefore, with regard to the obtained results, it can consider panel data as the suitable method for testing hypotheses.

HAUSMAN TEST

After specifying heterogeneity in sections, Hausman test is used to specify which method is more suitable for estimation. In Hausman test, null hypothesis implies that there is no relationship between the error term pertaining to width of origin and explanatory variables, yet alternative hypothesis implies that there is a correlation between the considered error term and explanatory variables. Therefore, hypothesis of Hausman test will be as follows:

$$H_0 = \text{Random effects}$$

$$H_1 = \text{Fixed effects}$$

As seen in table 6, results of Hausman test indicate that sig of chi-square statistics has been obtained greater than 5% for the models under study, thus it

can say that the null hypothesis in the models under study is confirmed and random effects is suitable for estimation of model.

Table 6
Results of Random Effects Test Model

Null hypothesis	null hypothesis	chi-square statistics	Freedom degree	Sig	Result of test	Selected model
There is no difference in systematic coefficients	the first hypothesis	0.966	1	0.326	Accepting H_0	Random

TESTING THE RESEARCH HYPOTHESES

The First Hypothesis

There is a significant relationship between audit quality and extent of deviation in predicted profit.

Studying results of regression model indicate that sig of *f*-statistics (11.098) is under 1%, thus it can reject H_0 and confirm H_1 at confidence level (99%), *i.e.* there is a significant relationship between extent of audit quality and extent of deviation in predicted profit. On the other hand, determination coefficient of fitted model indicated that 1.8% of total changes in dependant variable have been elaborated by the variable of family ownership. Further, *t*-statistics and sig have been used to detect effect of variables on dependant variable. Yet, absolute value of calculated *t* is greater than value of *t* in table, whereby null hypothesis is rejected, otherwise it cannot reject null hypothesis. Further, sig indicates minimum probability for confirming null hypothesis based on the considered coefficient when equaled to 0, so that if this probability is greater than 5%, null hypothesis cannot be rejected, otherwise the considered coefficient is significant. As observed, sig of *t*-statistics for the variable of audit quality (-3.338) is under 1%, that is, it has a negative significant effect extent of deviation in predicted profit at error level (1%). Further,

Table 7
Results of Testing the First Hypothesis

Variable	Regression	Standard error coefficient	t-statistics	Sig
Fixed value	0.001	0.004	0.263	0.793
Family ownership	–0.013	0.004	3.338	–0.0009
Determination coefficient	0.022	*f*-statistics	11.098	(0.0009)
Adjusted determination coefficient	0.020	Durbin-Watson	1.871	

studying the regression coefficient for the variable of audit quality (0.013) indicates that extent of deviation in the predicted profit of companies changes or reduces for about 0.013 per a change or increase in the variable of audit quality.

CONCLUSION

In today's communities, from point of view of users, those information are called reliable information which an independent organization monitors process of reporting within companies and the gravity center of this process which is financial statements.

Audit institutions are samples of these independent organizations that structure of internal control in reporting unit and end product of this internal control system which is financial statements are monitored in business enterprises. It should be noted that information requirements and expectations of different intra-organizational and inter-organizational groups which use financial statements including managers, investors, users and government pave the way for financial reporting at economic enterprises. The users require planning to make proper decisions. Currently, the required information of users is provided for them in form of fundamental financial statements including balance sheet, income statement and cash flow statement together with explanatory notes. Information of financial statements is useful for the users having reliable qualitative feature, whereby this comes to realize when the financial effects of transactions and other financial events have been measured in an impartial way having reliable measurement results. It must state that higher audit quality can increase reliability of financial statements, which this causes reduction in information asymmetry and reduction in costs for acquisition of new capitals. Therefore, with regard to what mentioned above, studying audit quality is of great importance. In Iran capital market, quality of audit comments and effective features of auditors seem essential. This can cause real understanding of users of financial statements from real quality of audited reports by auditors and creating a common language concerning audit quality. This will be of great importance to know whether the cases existing in audit committee can indicate that the audit comments should have been monitored. With regard to given explanations, we make an attempt to elaborate results of hypotheses.

The First Hypothesis

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Studying results of regression model indicate that sig of f-statistics (11.098) is under 1%, thus it can reject H_0 and confirm H_1 at confidence level (99%), that is, there is a significant relationship between extent of audit quality and extent of

deviation in predicted profit. On the other hand, determination coefficient of fitted model indicated that 1.8% of total changes in dependant variable have been elaborated by the variable of family ownership. In analysis of this hypothesis, it must say that accuracy in prediction of earnings per share increases and deviation in prediction of earnings reduces by increasing ability of auditor in discovering deviations in accounting and evaluating ability and independence of auditor.

This indicates that the more auditor has the ability to discover intentional or accidental deviations in financial statements, transparency of financial information increases and managers enable to predict earning and increase accuracy in prediction, yet the important point lies on this fact that prediction is a probability not mentioned required. More specifically, the managers should increase accuracy in prediction of earning and reduce deviation in prediction of earning using the information of the past and reality of their financial statements as well as the transparent information which are provided for them by auditors. Result of this hypothesis is consistent with result of research by Hartnett N, Romcke J. (2000) who said that there is an inverse relationship between audit quality and error in prediction of relationship management. Further, result of this research is consistent with result of research by Malekian *et al.* (2014) who said that there is a negative relationship between prediction period, financial leverage, company lifetime, audit quality and deviation in accuracy of prediction of earning per share.

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