Investigating the Relationship between Audit Quality and the Earning Response Coefficient of Listed Firms in Tehran Stock Exchange

Iman Heydari
Master of Accounting, Central Tehran Branch, Islamic Azad University, Tehran, Iran
*Corresponding author email: imanheydari4153@gmail.com

Abstract

In this study, the relationship between audit quality and earning response coefficient of listed firms in Tehran stock exchange organization is investigated. In particular, the aim of present study is to investigate the relationship between variables such as audit firm size, auditor industry specialization, audit committee tenure, and earning response coefficient (ERC). In order to answer the research questions, one primary hypothesis and four secondary hypotheses are developed and tested on 100 firms selected from the firms listed in Tehran stock exchange (T.S.E). The applied method is a descriptive correlation research method. For testing the hypotheses, a combination of regression models and panel data were used. The results of this study indicate a direct meaningful relationship between audit firm size, auditor industry specialization and the length of auditor tenure on ERC. However, no meaningful relationship was observed between the existence of an audit committee with ERC. In general, this study found that increasing audit quality in firms leads to increase of ERC.

Keywords: Audit Quality, Abnormal Return, Unexpected Earning, Earning Response Coefficient.

1. Introduction

Investors and credit makers need information for sale, purchase, and maintenance of stocks and to give credit to firms. The most important source of information for investors and credit makers' decision making is financial accounts. Every rational decision maker invests on a project in order to find earning and money. So, earning is the vital element which affects the decision of financial accounts users (Arab mazar Yazdi & Karani, 2001). Although the concept of earning as a fundamental measurement tool is confronted with some criticisms but from an information point of view, it refers to the outcome of audit activities (Bandiopaiba 1994). Empirical research also shows that accounting earning has an information load within itself (Sajjadi, 1998).

However, a significant problem is doubt in reliability of such information whose origin is interest contradiction. Beside interest contradiction, other issues such as lack of direct access of users to information may lead to rise of demands for independent audit services. In fact, the role of auditing is evaluation of information quality for users (Dunn & Mayhew 2004, Kwong 2011). The role of auditing in accreditation of firms' information about earnings has found considerable significance following the recent representation of firms' earning and bankruptcy of large firms. Differences due to audit quality show itself in the form of differences presented by auditors and employers' earning quality. Since audit quality has different dimensions and it is naturally unobservable, there is no specific auditing characteristics which can be considered as an index of quality. Most of the previous studies have used auditor brand name reputation, auditor industry specialization, length of auditor tenure, and the existence of an audit committee as indices for audit quality; and investigated the relationship between them and ERC (Teoh & Wong 1993, Habib & Bhattacharya 2011, Okolie 2014). Evidence found in the U.S, New Zealand, and Nigeria indicate that indices of audit quality have a positive meaningful relationship on earning response coefficient.

The structure of the article is as following: in second and third sections, theory and review of literature are presented. Then, research methodology which includes research hypotheses, design and data collection methods, statistical population, sampling method and sample volume, models representation, operational definition of research variables, and finally data analysis and testing hypothesis are discussed in the fourth section. In the last section research findings are discussed and conclusion and suggestions are provided.

2. Theoretical framework

Globalization is associated with development and market dynamics. Meanwhile, it brings about instability and higher degrees of doubt in large firms. Moreover, financial scandals in the world create concerns in relation with reliability of financial accounts. Moreover, the pressure of recent financial crisis on most countries in the world has increased demands for high quality audit (Piot 2001). Inappropriate and inadequate disclosure of information in financial reports and unclear information in firms increases problems due to separation of ownership from management (Fan et al, 2005). Avoidance from presenting reliable financial information brings about irreparable economic damages to shareholders and external stockholders. Among this, independent auditing supports the utmost benefit of stockholders through accreditation of financial statements, guaranteeing reliability and probing

the quality of financial information. Moreover, investors, credit makers, and other stockholders rely on the findings of audit process done by independent audit institutions in order to evaluate financial performance of various commercial units and to decide in different investment situations. Hence, the higher is audit quality, the higher is its value, credit and acceptability for users of financial statements (Ashbaugh & et al 2003). A comprehensive definition for audit quality which includes all kinds of auditing and auditors does not exist. Thus, variables such as the size of audit committees, its experience and the brand name are considered as alternatives for audit quality (Francis & et al 1988).

Deficiency in audit and casting doubts on the quality of auditors' work effects seriously the decision and reaction of investors toward earning. So, as the level of precision of reported earning becomes higher, the market response toward reported earning and disorders are increased. Besides, its impact on rational decision making process of users brings about a general demand on more attention to reliability of audit reports and extensive monitoring on auditors' activities (Teoh & Wong 1993, Habib & Bhattacharya 2011, Okolie 2014).

Recent studies (Moradi et al 2010, Arab Mazar Yazdi & Karani 2011, Rahmani et al 2012) on ERC has shown that there is a meaningful relationship between strategy of increasing earning and ERC. In another research, it is found that there is no relationship between earning quality and ERC. Also, other studies show that predicting future earnings has a direct impact on ERC. In summary, it can be said that ERC has been investigated from different scopes; however, investigating the effect of audit quality on ERC has not been paid much attention. As a result, research and investigation of response coefficient provides a useful guide for accountants, managers and accounting standard developers in order to develop efficient financial statements which have higher informative capacities and will lead to decrease of information asymmetry.

Regarding the above items, the main issue of present study is to demonstrate the relationship between audit quality indices and ERC in listed firms in Tehran stock exchange.

3. Review of literature

Wikil (1990) investigates the impact of auditor rotation on earning quality and ERC. He assumed that earning reaction in firms which change their auditor shows a considerable change. The statistical findings showed no significant change and he could not prove his hypothesis statistically.

Teoh & Wong (1993), investigated whether ERC is different in firms which were audited by eight large audit firms compared to firms which were audited by other audit institutions. Regarding the common hypotheses, they found that the ERC of eight large institutions are statistically larger that clients of other institutions. Moreover, the results were reinforced through imbedding other explanatory criteria for ERC suggested by previous research; these criteria include growth and continuous activity, risk, firm size, and environment before information disclosure. Walker & et al (2001), investigate the relationship between the length of audit process and financial scandals. It was found that most of financial scandals took place in long term relationships; however, the highest rate of financial scandal happens in short term. Since the rate of financial al scandals were low in long term periods the researcher concluded that rotation of audit institutions is not necessary for decreasing the rate of financial failures.

Balsam & et al (2003) compare discretionary accruals and ERC of firms which are audited by industry specialist auditors with those firms which are not audited by industry specialist auditors. In this study for controlling brand name reputation variable of auditor, clients of six large audit firms (later four) were used. They found that clients of industry specialist auditors have less discretionary accruals and higher ERC compared to employers of auditors without industry expertise. So the findings are consistent with the view that industry specialist auditors provide higher quality earnings compared to auditors without expertise in the industry.

Abbot & Parker (2003) investigate replacing independent auditor and conclude that the existence of active independent audition in firms has a close relationship with increasing the quality of auditing. These findings are also consistent with agency theory and indicate that the existence of laws increase the audit quality since auditor may not be influenced by management temptations.

Myers & et al (2003) investigate the role of length of auditor tenure on audit quality. They concluded that when the length of auditor tenure is higher, his understanding of employer and his expertise in the industry is increased thus leads to increasing the audit quality.

Carcello & Nagy (2004) study the relationship between audit quality and rotation of audit institution regarding financial reporting. The findings of their research show a direct relationship between short term relationship with auditors and the number of reports containing significant distortions. In general, significant distortions happen in the early years of audit, hence in this situation rotation of audit institutions affect audit quality negatively.

Ghosh & Moon (2005) consider the relationship between the length of tenure and the viewpoint of investor about quality of earning. They found little evidence which demonstrate independent firms evaluate long term tenure of an employer's audit as an effective factor on earning quality.

Jenkins & et al (2006) investigate the effect of Industry specialist auditors on reducing return quality in

late 1990s i.e. whether these auditors have any role in stopping the reduction of return quality in late 1990s. the findings of their research indicates a meaningful raise in the amount of discretionary accruals and a meaningful reduction in ERC which show the reduction of earning quality in this period; however, increasing in discretionary accruals and decrease in ERC were lower in firms who used Industry specialist auditors compared to other firms.

Behen & et al (2007) define audit quality with two independent variables including auditor industry specialization and audit firm size. The finding of this study shows that firms which are audited by higher quality auditors represent more accurate earning predictions and firms which are audited by auditors of other five large audit firms showed more deviation in earning prediction.

Chantao & et al (2007) analyze the understanding of stock market from audit quality among a number of small audit institutions in China audit market. They found that there is a positive relationship between the size of audit institution and investors' interpretation from earning quality. The findings show that different size of audit institutions affect on audit quality.

Habib & Bhattacharya (2011) investigate the effect of specializing audit on ERC. In this study they compared ERC of firms with specialized audit with ERC of firms without specialized auditing. They found that the quality of audit is positively related to the earning quality of firms and also with their ERC (response to unexpected earnings). In other words, firms with specialist auditors have higher ERC than firms with non-specialist auditors.

Okolie (2014) studies the relationship between audit quality and ERC in Nigeria firms. Audit quality is estimated through variables including audit firm size, audit fees, length of auditor tenure and the importance of auditing of client. The findings showed that audit quality has a considerable impact on ERC. In other words the relationship between size of the audit institution, length of auditor tenure and the importance of auditing of client with ERC is positive and meaningful and the relationship between audit fees and ERC is negative and meaningful.

Khoshtinat & Falah-Joshaghani (2006) investigate the effect of financial leverage on ERC. In their research they use balance sheet approach. In balance sheet approach two definitions are provided for leverage: 1. the proportion of debts to assets and 2.The proportion of debts to return on equity. Testing the main hypothesis by regression analysis in time period of 2000-2004 revealed that there is a reverse relationship between financial leverage and ERC in the first definition of leverage in total level of sample and high level of leverage, and in second definition in high level of leverage. In second definition in total level of sample and low level of leverage, no meaningful relationship was observed between financial leverage and ERC.

Etemadi et al (2009) examine the association between measures of earnings quality and auditor industry specialization. They compare the absolute level of discretionary accruals (DAC) and ERC of firms audited by industry specialists with those which are not audited by industry specialists. This study restricts itself to clients of auditors who are accepted for Stock and Exchange Organization (SEO) to control the brand name. Furthermore, they use market share approach to determine industry specialist auditors. They found clients of industry specialist auditors have lower DAC and higher ERC than clients of non-specialist auditors. In other words, industry specialist auditors provide higher quality audit to their clients.

Rahmani et al (2012) study the effect of publishing earning anticipation on future ERC. The findings of research show that anticipating management affects on the relationship between return and future earnings. The more anticipation time occurs and its error is lower, its credit increases in the view of investors.

3. Methodology
3.1. Research hypotheses
In order to investigate the relationship between auditor quality and ERC, one main hypothesis and four secondary hypotheses are developed and tested. The hypotheses are as following:
Primary hypothesis: there is a meaningful relationship between audit quality and ERC.
First sub-hypothesis: there is a meaningful relationship between audit firm size and ERC.
Second sub-hypothesis: there is a meaningful relationship between auditor industry specialization and ERC.
Third sub-hypothesis: there is a meaningful relationship between length of auditor tenure and ERC.
Fourth sub-hypothesis: there is a meaningful relationship between the existence of audit committee and ERC.

3.2. Research design and data collection
This study is included in the category of financial research. Regarding the historical information used in testing its hypotheses, it is classified in quasi-experimental studies. Since the goal of this study is to investigate the relationship between free cash flows and firm's performance, the nature of research methodology is a correlational descriptive study.
In the present research, data were gathered in two ways:
1. In order to enrich the theoretical background of the study, Persian and English specialized books and

magazines were used.

2. The information regarding research variables are gathered by reference to financial records, explanatory sheets and using the software "Rahavard Novin ed3."

3.3. Statistical population, sampling method and sampling volume

The statistical population of this study includes all listed firms in Tehran securities and stock exchange organization during 2008-2012. The quality of information and easy access to the information of financial documents and other data were important reasons for this choice.

Regarding the goals of research and some inconsistencies among listed firms in Tehran securities and stock exchange organization, the systematic deletion method of sampling was used. The following conditions were regarded necessary for being in research population:

1. It is not considered as a bank, financial, investment, holding or leasing institution. Because their special area of activity affects the relationship between factors which are investigated in this study and they cannot be generalized.
2. The firm must be listed in stock exchange organization before the end of 2007 and it must not have exited from stock exchange list during 2008-2012.
3. In the mentioned period, the firm must be actively engaged in stock exchange and their stocks must be continuously transacted.
4. For comparability issues, the financial year of firm must end 29th Esfand (20th March) of every year.
5. The firm had no change of financial year during 2008-2012, and it is not broken.
6. Financial accounts of firm must be available.

100 firms met the above criteria during 2008-2012, in other words 500 years of firms are selected as statistical sample.

3.4. Constructing Models and operational definition of research variables

To test the hypothesis, the following regression models will be used:

$ERC_{i,t} = \beta_0 + \beta_1\ AS_{i,t} + \beta_2\ FL_{i,t} + \mathcal{E}_{i,t}$ (1) $ERC_{i,t} = \beta_0 + \beta_1\ AIS_{i,t} + \beta_2\ FL_{i,t} + \mathcal{E}_{i,t}$
(2) $ERC_{i,t} = \beta_0 + \beta_1\ AT_{i,t} + \beta_2\ FL_{i,t} + \mathcal{E}_{i,t}$ (3) $ERC_{i,t} = \beta_0 + \beta_1\ AC_{i,t} + \beta_2\ FL_{i,t} + \mathcal{E}_{i,t}$
(4) Supposed as:

$ERC_{i,t}$: Earnings response coefficients for firm i in year t;

$AS_{i,t}$: Audit firm size for firm i in year t;

$AIS_{i,t}$: Auditor's specialization in the industry for firm i in year t;

$AT_{i,t}$: Auditor tenure for firm i in year t;

$AC_{i,t}$: Audit committee for firm i in year t;

$FL_{i,t}$: Financial leverage for firm i in year t;

$\mathcal{E}_{i,t}$: The errors.

3.4.1. Independent variable

Our independent variable is audit quality; according to Teoh & Wong (1993), Habib & Bhattacharya (2011) and Okolie (2014) it can be evaluated by four indexes: size of audit firm, auditor industry specialization, length of auditor tenure, and the existence of audit committee. The calculation process is as following:

Audit firm size: includes a planar variable where big audit firm is selected for audit, digit one and where other audit firms are selected digit zero is taken.

Auditor industry specialization: in this study market share is used as an index of auditor industry specialization, because it shows the priority of industry compared to other auditors. When the market share of auditor is higher, his industry specialization and experience is higher than his rivals. Having the major market share refers to successful distinction of auditor from his rivals in terms of audit quality. Auditors' market share is calculated as following (Etemadi et al 2009). In this study, firms which have a share market over {(1.2 *(number of firms in an industry/1)} are considered as industry specialist. Hence, firms which are audited by industry specialist auditors are represented by digit 1, otherwise digit 0.

Auditor tenure: includes the number of years that firm has not replaced its auditor, i.e. the years an auditor is under employment of a firm.

Existence of audit committee: includes a planar variable, where firms with audit committee are represented by digit 1 and otherwise digit 0.

3.4.2. Dependent variable

Dependent variable in this study is Earning Response Coefficient (ERC). According to Teoh & Wong (1993), Habib & Bhattacharya (2011), Hansen (2007) and Okolie (2014) it is calculated as following:

ERC: it is calculated by following formula:

$$AR_{i,t} = \alpha + \beta_1\, UE_{i,t} + \varepsilon_{i,t}$$

Where AR indicates abnormal return and UE indicates unexpected earning.

Unexpected earning: this earning shows the error of earnings anticipation or the difference of real earning and the anticipated earning. The lower unexpected earning means lower error of earning's anticipation, as a result earning has higher quality. For calculation of unexpected earning, the difference of anticipated EPS and real EPS on absolute value of EPS is used.

Abnormal Return: it is calculated from difference of t period and t-1.

$$R_{i,t} = [D_t + P_t\,(1 + \alpha_1 + \alpha_2) - (P_{t-1} + C_{a1}) \,/\, P_{t-1} + C_{a1}] * 100$$

$$AR_{i,t} = R_{i,t} - R_{i,t-1}$$

Where R indicates Return,

D = cash dividends paid;

α_1= percent capital increase brought of receivables and cash;

α_2=% increase brought of receivables and cash;

P= stock price;

C = the nominal amount paid by investors for the capital increase of cash and receivables.

3.4.3. Control variable

The control variable of research is financial leverage.

Financial leverage: one of the most scales of leverage is the proportion of debt which is calculated as following (Bozorgasl, 2006:85).

$$FL_{i,t} = Debt_{i,t} / Assets_{i,t}$$

Where FL is financial leverage, Debt: total debts and Assets: total assets.

3.5. Data analysis methods and testing the hypotheses

In this study, combinatory data method is used. Testing statistical hypotheses is done through multiple linear regressions and ordinary lease squares method (OLS). Data analysis is done through Excel 2010, Stata 9/1 and E-views edition 7.

When a regression model is used with combinatory data, it must be determined that from combinatory data models, panel data model with fixed effects and panel data model with random effects, which one better explains the relationship between dependent and independent variables. In order to understand which model is appropriated for research data, first we test combinatory data model and panel data model with presuppositions based on Chow test (or limited F) as the following:

H_0: Combinatorial model: all intercepts are equal.

H_1: Panel model: at least one of the intercepts is different from others.

If hypothesis zero is confirmed, then combinatory model is preferred and is used for developing our model of study. But if hypothesis zero is not confirmed and panel model were proven to be preferred, we need to test it against fixed or random effects using Hausman test and regulating the following hypotheses:

H_0: Panel model-random effects: there is no correlation between personal effects and explained variables

H_1: Panel model-fixed effects: there is a correlation between personal effects and the explained variables

If hypothesis zero is confirmed panel model- random effects is the appropriate model for developing study model, otherwise, panel model-fixed effects must be used for developing study model (Aflatooni & Nikbakht, 2010).

In order to investigate the significance of the model from F statistics and for investigating the significance of coefficient of dependent variables in every model t statistics is used and hypotheses are accepted or rejected at certainty level of 95%.

4. Research findings

4.1. Descriptive Statistics

Descriptive statistics of research variables for sampled firms are presented in table (1).

Table (1): Descriptive statistics of research variables

variables	N	Min	Max	Mean	SD	Skewness	Kurtosis
Abnormal return	500	-2/160	6/060	1/615	1/004	1/162	5/110
Unexpected earning	500	-1/016	2/411	0/050	0/450	3/822	4/510
Audit firm size	500	0	1	0/604	0/490	-0/472	-1/825
Auditor industry specialization	500	0	1	0/748	0/435	-1/146	-0/690
Auditor tenure	500	1	5	2/788	1/436	0/498	-0/718
Audit committee	500	0	1	0/124	0/330	2/289	3/250
Financial leverage	500	0/096	0/952	0/602	0/154	-0/381	-0/047

As it can be observed in the above table, the highest mean is related to auditor tenure and lowest mean

is related to unexpected earning. Standard deviation of data shows deviation of data from mean. Low standard deviation denotes low deviation from mean and high standard deviation denotes high deviation of data from mean. Financial leverage variable has the lowest deviation from mean and audit tenure has the highest deviation from mean.

4.2. Examination of validity and reliability of variables
Since the data used in this study are secondary quantitative data collected from websites affiliated to T.S.E and meets the standards of this organization, their validity is proved. Reliability of research variable indicates that the mean, variance and co variance of variables remain stable during time and in different years. Using these variables in the model does not create spurious regression (Namazi & Kermani, 2008). In order to estimate the reliability of research, combinatory data from unit root test of combinatory data were used. In this study, we used Levin & et al and Philips-prone tests are used for unit root test, which is represented in table (2).

Table 2: results of testing unit root of research variables

variables	Philips-Prone test		Levin & et al		result
	t-statistics	Sig.	t-statistics	Sig.	
Abnormal return	214/804	0/000	-22/571	0/000	The variable is reliable
Unexpected earning	257/162	0/000	-24/407	0/000	The variable is reliable
Audit firm size	463/596	0/000	-31/070	0/000	The variable is reliable
Auditor industry specialization	304/409	0/000	-25/203	0/000	The variable is reliable
Auditor tenure	301/350	0/000	-24/210	0/000	The variable is reliable
Audit committee	280/100	0/000	-20/001	0/000	The variable is reliable
Financial leverage	206/426	0/000	-9/971	0/000	The variable is reliable

As table 2 shows, results from Levin & et al and Philips-prone tests prove that all research variables are in a reliable level. So the reliability of research variables is confirmed. As a result, the examined firms had no structural differences and using these variables does not lead to spurious regression.

4.3. Testing research hypothesis
4.3.1. Model selection Test
Table (3) represents the findings related to model selection for each subordinate hypothesis related to main hypothesis.

Table 3: the results of model selection for testing each hypothesis

	test	Main hypothesis		Suitable model
		F-statistic	Significance level	
First sub-hypothesis	Chow test	5.41	0/000	Panel
Second sub-hypothesis	Chow test	5.65	0/000	Panel
Third sub-hypothesis	Chow test	5.56	0/000	Panel
Fourth sub-hypothesis	Chow test	5.51	0/000	Panel

As observed above, the significance level of Chow test is lower that accepted level of error (5%) in 1st-4th sub-hypothesis, so hypothesis zero is rejected based on equality of intercepts and the other hypothesis is accepted. As a result in this step, a panel model –fixed effects must be tested against panel model-random effects. This test is conducted through Hausman test as presented in table (4).

Table 4: the results related to model selection for testing each hypothesis

	test	Main hypothesis		Suitable model
		F-statistic	Significance level	
First sub-hypothesis	Hausman test	94.02	0/000	Fixed effects
Second sub-hypothesis	Hausman test	86.09	0/000	Fixed effects
Third sub-hypothesis	Hausman test	89.83	0/000	Fixed effects
Fourth sub-hypothesis	Hausman test	70.29	0/000	Fixed effects

As observed above, the significance level of Hausman test is lower that accepted level of error (5%) in 1st-4th sub-hypothesis, so hypothesis zero is rejected and the other hypothesis is accepted. This quantity shows that the method of fixed effects must be used. In rest, a regression test through panel data-fixed effects must be conducted.

4.3.2. Main hypothesis
In order to test our main hypothesis, each variable was considered in a separate secondary hypothesis to find the relationship between one of the variables of audit quality (audit firm size, auditor industry specialization, auditor

www.iiste.org

IISTE

tenure and existence of audit committee) with ERC. The results of testing secondary hypotheses are presented in table (5).

Table 5: results of regression models estimation to test the main hypothesis

variables	First sub-hypothesis			Second sub-hypothesis		
	coefficient	t-statistics	Sig.	coefficient	t-statistics	Sig.
y-intercept	0/122	16/620	0/000	0/070	6/450	0/000
Audit quality indexes	0/085	2/790	0/005	0/512	1/915	0/045
Financial leverage	-0/192	-4/823	0/000	-0/239	-6/256	0/000
Adjusted R2	0/565			0/509		
f-statistics	37/248			34/845		
Sig.	0/000			0/000		
Durbin-Watson	1/724			1/712		
variables	Third sub-hypothesis			Fourth sub-hypothesis		
	coefficient	t-statistics	Sig.	coefficient	t-statistics	Sig.
y-intercept	0/083	7/791	0/000	0/072	13/266	0/000
Audit quality indexes	0/068	2/053	0/041	0/021	0/299	0/096
Financial leverage	-0/185	-4/256	0/009	-0/204	-4/894	0/000
Adjusted R2	0/541			0/494		
f-statistics	43/533			33/154		
Sig.	0/000			0/000		
Durbin-Watson	1/739			1/714		

Regarding that significance level of f-statistics is smaller than 0.05 (0.000) the meaningfulness of model is confirmed with 95% certainty. Also, Durbin-Watson statistics is estimated between 1.5—2.5, so the independency of model residuals are confirmed too.

As observed above, significance level of t-statistics of 1st to 4th secondary hypotheses also indicate that there is a direct meaningful relationship between three indexes of audit firms size (1st S H) auditors industry specialization (2nd S H) and auditor tenure (3rd SH). However, no meaningful relationship was found between existence of audit committee (4th S H) and ERC. So the main hypothesis "there is a meaningful relationship between audit quality and ERC" is accepted.

5. Discussion and Conclusion

According to the findings based on first secondary hypothesis, there is a direct meaningful relationship between audit firm size and ERC. In other words, ERC is higher in firms which are audited by large audit firms. We can justify this relationship by the fact that large audit firms have larger clients, as a result the expectation of market to discover distortions in financial statements are increased. Moreover, empirical evidence shows that larger audit firms have higher quality audit because they own better resources and facilities for educating auditors compared to smaller audit firms. The result of this hypothesis is consistent with Teoh & Wang (1993), Behen et al (2007), Chantao et al (2007) and Okolie (2014).

According to the findings based on 2nd secondary hypothesis: there is a meaningful relationship between auditor industry specialization and ERC. In other words, ERC for firms which are audited by industry specialist auditors is higher. In order to justify this relationship it has been said that firms which are clients of industry specialist audit firms enjoy a better quality reported earning which is announced in the statements of market reaction to reported earning i.e. industry specialist auditors act better in presenting higher quality proceedings compared to auditors without industry specialization. As a result, investors can make appropriate decisions about the quality of reported earnings by firms regarding the auditor industry specialization. This finding is consistent with findings of Balsam et al (2001, 2003), Jenkins & et al (2006) and Habib & Bhattacharya (2011).

According to the findings based on 3rd secondary hypothesis: there is a meaningful relationship between length of auditor tenure and ERC. In other words, ERC is higher in firms with longer tenure of an auditor. For justification of this relationship, it has been said that the rotation process of audit firms leads to maintenance of auditor independency through disconnecting the long term connection between auditor and employer. However this process may lead to decrease in the quality of audit services of new audit firms in the earlier years of rotation due to lack of familiarity with employer and its activities. So, the lower the rotation of audit institutions, the higher becomes the quality of audit and ERC. The finding of this hypothesis is consistent with Walker et al (2001), Myers et al (2003), Carcello & Nagy (2004) and Okolie (2014) and inconsistent with Wikil (1990) and Ghosh & Moon (2005).

According to the findings based on Fourth secondary hypothesis: there is no meaningful relationship

between the existence of audit committee and ERC. For justifying this relationship it can be said that audit committees have several tasks and functions which can have positive effects on performance of accounting and internal audit units if they are placed and activated appropriately in economic units. However, evidence found in T.S.E indicate that firms pay less attention to the existence of an audit committee which can be the underlying cause of absence of relationship between existence of audit committee and ERC. The finding of this hypothesis is not consistent with Abbot & Parker (2003).

Regarding the control variable, financial leverage has a meaningful negative effect on ERC in sample firms. Although investors may not pay much attention to many of debt amounts but when the financial leverage and debt amount of a firm increases, it influences the reaction of investors since rational investors avoid risks. This is consistent with findings of Khoshtinat and Falah-Joshaghani (2006).

5.1. Research suggestions
Suggestions based on research finding
Regarding that the main hypothesis "audit quality has direct effect on ERC" is confirmed, it is suggested that:
1. It is suggested to investors, credit makers and other users of financial statements to pay attention to the quality of audit institutions which examine firms in their decisions.
2. It is suggested to firms to use large audit firms and industry specialist auditors and less rotation of auditors.
3. It is suggested to audit institutions to specialize their activities.
4. Related organizations such as Iranian community of auditors, attempt to rank audit institutions based on the quality of audit services so that firms can distinguish between audit firms in terms of quality and select their needed auditor.
5. a review of the history and experience of economic units of developed countries in the field of creating and using audit committee it becomes obvious that the existence of an audit committee is the basic need of every economic unit which can maintain the interest of users of accounting information and financial reports, especially investors as capital providers to a reliable degree. As a result, it is suggested that all firms listed in T.S.E attempt to create an audit committee.

5.2. Suggestions for further research
The following issues are suggested for future related research:
1. conducting research based on type of industry
2. Conducting this research with other indexes of audit quality evaluation such as audit fees, the history of audit firm, etc.
3. Conducting research about identifying the effective factors in selecting auditor in Iran regarding economic, political, cultural, social and administrative criteria.

References
Ashbaugh, H., and Warfield, T.D. (2003). Audits as a Corporate Governance Mechanism: Evidence from the German Market. *Journal of International Accounting Research*, Vol. 2, pp. 1-21.

Abbott, L.J, Parker, S. (2003). The association between audit committee characteristics and audit fees. *Auditing: Journal of Practice and Theory*, vol.22. No.2 pp.17-32.

Aflatooni, A. and Nikbakht, L. (2010). Applying econometrics in accounting research, financial management and economic sciences. 1st ed, *Termeh Publication*.

Arab MazarYazdi, M. and Karani, K. (2011). Investigating the relationship between earning strategy and earning response coefficient: evidences from Tehran stock exchange. *Journal of accounting and auditing research*, 18 (64), 113-128.

Bandyopadbyay, S. (1994). Market Reaction to Earnings nnouncements of Successful Efforts and Full Cost Firms in The Oil and Gas Industry. *The Accounting Review*, 69, 657-674.

Balsam, S., Krishnan, J., Yang, J.S. (2001). Auditor industry specialization and the earnings response coefficient. *Working paper*, Temple University.

Balsam, S., Krishnan, J., Yang, J.S., (2003). Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice and Theory* 22-2, 71–97.

Behen B. K., Jong-Hang, C., and Kang, T. (2007). Audit Quality and Properties of Anlyst Earning Forecasts. *Working paper*, SSRN.

Bozorgasl, M. (2006). Median accounting-financial statements. 2nd ed. *Audit organization-standard development management*, Tehran.

Carcello J.V. and Nagy A.L. (2004). Audit Firm Tenure and Fraudulent Financial Reporting. *Auditing: A Journal of practice & Theory*, Vol. 23, Issue2, pp. 55-69.

Chantao Li, Frank M. Song. and Sonid M L Wrong (2007). Audit firm size and perception of Audit Qaulity:

Evidences from Lometitve Audit market in China" Janury , pp.1-17.

Dunn, K., and Mayhew, B. (2004). Audit firm industry specialization and client disclosure quality. *Review of Accounting Studies*, 9, 35-58.

Etemadi, H. Mohammadi, A and Nazemi Ardakani, M. (2009). Investigating the relationship between auditor industry specialization and earning quality in firms listed in Tehran Stock Exchange. *Journal of accounting research*, fall and winter 2009, 1(1-2), 17-32.

Fan, J. P. H.; and T. J. Wong (2005). Do External Auditors Perform a Corporate Governance Role in Emerging Markets? Evidence from East Asia. *Journal of Accounting Research*, Vol. 43, No. 1, pp. 35-72.

Francis, J. R., and E. R. Wilson (1988). Auditor Change: a Joint Test of The ories Relating to Agency Costs and Differentiation. *The Accounting Review*, pp. 663-682.

Ghosh A, Moon D. (2005). Tenure and perception so audit quality. *The Accounting Review* 2005; 80(2): 585-612.

Habib, A. and Bhattacharya, S. (2011). Auditor Industry Specialization and Earnings response coefficient: A New Zealand perspective. A dissertation submitted to Auckland University of Technology in partial fulfillment of the degree of Master of Business.

Jenkins, D. S., Kane G. D. and Velury U (2006).Earnings quality decline and the effect of industry specialist auditors: An analysis of the late 1990s. *Journal of Accounting and public policy*, Vol. 25, 71-90.

Kwong, J. (2011). The Relationship between Industry Specialization and the Audit Fee Premium in New Zealand. *International Journal of Business and Social Science*.

Khoshtinat, M. and Falah-Joshaghani, H. (2006). The effect of financial leverage on earning response coefficient. M.A thesis, *Allameh Tabataba'ee University*.

Levin, A., Lin, C. F., J. Chu (2002). Unit Root Tests in Panel Data: Asymptotic and Finite Sample Properties. *Journal of Econometrics*, Vol. 108, pp. 1-24.

Myers, J. N., Myers, L. A., and Omer, T. C. (2003). Exploring the Term of the Auditor−client Relationship and the Quality of Earnings: A Case for Mandatory Auditor Rotation?. *Accounting Review*, Vol. 78, 779−800.

Moradi, M. Falahi, M.A. and Kami, M. (2010). Investigating the relationship between earning quality and earning response coefficient. *Journal of science and development*, 18 (33), 1-22.

Okolie, A. (2014). Audit Quality and Earnings Response Coefficients of Quoted Firms in Nigeria. *Journal of Applied Finance & Banking*, vol. 4, no. 2, 2014, 139-161.

Phillips, P. C. B. and Perron, P. (1988). Testing for a Unit Root in Time Series Regression. *Biometrika*, No. 75, (1988):335-346.

Piot, C. (2001). Agency Costs and Audit Quality: Evidence from France. *The European Accounting Review*, pp. 461-499.

Rahmani, A. Bashiri-manesh, N. and Shahrokhi, S. S. (2012). Investigating the effect of publishing earning anticipation on future earning response coefficient. *Journal of accounting science*, 3(10), 2-50.

Sajjadi, H. (1998). Factors relevant to unexpected earning and its relationship with stock price. *Journal of accounting and auditing research*, 6(24 & 25), 34-60.

Teoh, S. and Wong, T. (1993). Perceived Auditor Quality and the Earnings Response Coefficient. *The Accounting Review*, Vol. 68, No. 2 (Apr., 1993), pp. 346-366.

Walker P.L., Lewis B.L. and Casterella J.R. (2001). Mandatory auditor rotation: Arguments and current evidence. *Accounting Enquiries*, Vol.10 Issue 2.

Wikil K. (1990). Earnings response coefficients and the quality of earnings: The case of auditor change. University of Nebraska – Lincoln.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/   All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar