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AN EMPIRICAL STUDY: THE EFFECT OF AUDIT FEES AND RISK ON THE QUALITY OF FINANCIAL REPORTING

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Reza AbbasZadeh

*Department of Management,
Payame Noor University, Tehran,
Iran.*

Abstract: The purpose of current study was investigating the effect of audit fees and risk on the quality of financial reporting of the family firms listed on the Tehran Stock Exchange by using Litigation and report delay as the financial reporting quality criteria. To this end, data of 39 family firms listed on the Tehran stock Exchange for the period of 2012 to 2017 were used. Multivariate regression technique in the form of panel data was used to test research hypotheses. The research results revealed that there is a positive and significant relationship between the audit risk, litigation and reporting delay, a positive and significant relationship between the audit fees and litigation and a negative and significant relationship between the audit fees and delay in audit reports.

Keywords: Audit Risk, Litigation, delay in audit reports, audit fees, financial reporting quality

1. INTRODUCTION AND RESEARCH PROBLEM

The goals of financial reporting originate from the information needs and demands of the outsourced users. The main goal is to state the economic effects of events and financial activities on the status and performance of the commercial unit to help outsourced individuals to make financial decisions regarding the commercial unit. Today, accounting information systems play a very important role in the workflow of organizations and are in charge of an important task in the economic environment of the countries. Many of the economic decisions are made based on the information obtained from these systems, and a major portion of security exchanges are dedicated to purchasing and selling shares of firms, which in turn, can be influenced by accounting figures and information. Any study on the effect of accounting information on the wide range of shareholder decision makers in the firms can lead to a better understanding of the role of these information and the need for a more and better disclosure of them (Saghafi, 2010).

Audit fees are indicative of the economic costs of efficient auditors. From the auditing viewpoint, auditors seek to minimize the total costs by balancing their resource cost (the costs of doing more audit work) and future losses caused by legal liability. More audit effort reduces the possibility of auditors be incurred by debt losses, and the auditor presents an audit work that minimizes the total cost (Carsloo et al., 2002).

Due to this prediction that audit fees and risk have an influence on the financial reporting quality, the present study seeks to investigate the significance of these variables.

2. LITERATURE REVIEW

In a study titled “investigating the effect of intellectual capital on enhancing the quality of financial reporting of firms listed on Tehran Stock Exchange”, MahmoodAbadi et al., (2017) investigated the effect of intellectual capital on improving the quality of financial reporting of firms listed on Tehran Stock Exchange. Hence, using Francis et al. (2005) model, the optional component of the accruals’ quality and the Pulik model (2000) were used as an indicator of the quality of financial reporting and measuring the intellectual capital respectively. The statistical population of the present study consists of 76 firms listed on Tehran Stock Exchange which were investigated between 2003 to 2009, and the multivariate linear regression statistical analysis was used to test the research hypotheses. Testing research hypotheses showed that there is a direct significant relationship between the efficiency coefficient of the structural capital and efficiency

coefficient of the human capital with the financial reporting quality; but there is not a statistical significant relation between the efficiency coefficient of the physical capital and financial reporting quality. Ghobadian, Attaran, and Foroutan (2012) examined profit management in family and non-family firms. Their sample included 31 family firms and they found that there is a significant relationship between the profit management and firm ownership’s structure and on average, non-family firms have more profit management compared to family firms.

Rahimiyan, Rezapour and Akhhzari (2011) found that firms with higher levels of institutional ownership enjoy higher audit quality, while concentration of institutional ownership reduces audit quality. The size of the audit firm is regarded as one of the indicators of audit quality in their research.

In their study “assessing financial reporting quality of family firms: the auditors’ perspective”, Alope et al. (2015) found that this is an indicator of the significant effect of audit risk and fees on financial reporting quality. Moreover, firm size and age also have significant effect on financial reporting quality.

In a study titled “risk-taking firms, firm value and high levels of managerial earnings forecasts” Michael and Scott (2017) investigated the effect of high level of managerial income forecast, an important form of voluntary disclosure on firm value in large risk taking firms and firm value. Theory and evidence suggest that a policy of high disclosure may reduce managers’ willingness to invest in higher-risk higher-return projects. Reviewing previous research, we first showed that large risk taking firms are associated with higher value for the future of the firm. Then we presented documents regarding the negative relation between the firm with level of prediction and large risk taking firms. Finally, we provided evidence showing that a high level of managerial revenue prediction leads to a reduced positive relation between large risk taking firms and the future value of the firm. Are results are alternative measures of definitions that replace high levels of managerial revenue prediction of large risk taking firms and future value of the firm. Our results may have importance to various benefits as they have potential for high levels of revenue prediction to control risk taking firm and reduce the firm value.

In their research titled “the effect of exposing the efficiency of intellectual capital on financial reporting quality, Darabi and Salmani (2013) demonstrated that there is a positive significant relation between the human and physical capital and financial reporting quality; however, there is a negative significant relationship between the structural capital efficiency and financial reporting quality.

3. RESEARCH METHODOLOGY

The present research follows a descriptive correlational method and consequently uses regression analysis. In order to determine the statistical analysis path, the normality of the research structures must first be investigated. The statistical population of the present study consists of all the family firms listed on Tehran stock Exchange, 39 of which were selected based on this sampling method.

4. RESEARCH VARIABLES

4.1. Dependent variable

Financial Reporting Quality

The quality of financial reporting is the accuracy of the reported information for a better description of the firm's activities. In practice, information regarding the firm's cash flow is among information of interest to investors. This definition of financial reporting quality is consistent with that of Accounting Standards Board which state that one of the goals of financial reporting is to inform potential creditors and investors to help in making reasonable decisions and assessing the expected cash flow of the company.

1- Litigations:

If the auditor and employer are the defendants in a litigation, it equals to one and otherwise zero per year.

2- Delay in audit reports

Delay in audit reports equals to the logarithm of the number of the days between the end of the year and audit signing date.

4.2. Independent variables

1- Audit fees

Audit fee is determined based on the duration of auditors' terms of service, which is billed in accordance to the work progress. Auditors have different hourly fees depending on their experience and skill and consequently, the extent of the responsibility they are committed to. Audit fees include direct work hours' fees, other direct costs (for instance extra fees of off-center mission and transportation) and allocable overhead (Standard 21). The total fees received by the auditor for consulting and presenting audit services was used to calculate the audit fee rate through natural logarithm.

2- Audit risk

The accrual quality method modified in Dechow–Dichev model is used to calculate the audit risk rate in the present study (Francis et al., 2008). The accruals are first computed using Dechow–Dichev model and the audit risk is then measured based on the obtained accruals, so that the higher the level of accruals is than the average level, the audit risk is

one, and the lower the accruals level is than the average level, the audit risk is zero.

Therefore, the following model is used to measure accruals:

$$\text{(Model 1) } TCA_{jt} = \beta_0j + \beta_1 * CFO_{jt-1} + \beta_2 * CFO_{jt} + \beta_3 * CFO_{jt+1} + \beta_4 * \Delta REV_{jt} + \beta_5 * PPE_{jt} + \epsilon_{jt}$$

Where:

TCA_{jt} : represents all the current accruals of the for the firm "i" in year "t"

ΔREV_{jt} : represents change in net sales from t-1 to t

PPE_{jt} : represents gross value of the property and machinery of firm "i" in year "t"

CFO_{jt} : represents operating cash flow

ϵ_{jt} : represents estimate error

β : represents variable coefficient of audit risk

The accruals quality is the degree of proximity of the firm's profit with the generated cash flow rate

The modified model of Dechow et al. (2002) is used to calculate the quality of accruals:

$$\text{(Model 2) } TCA = \Delta CA - \Delta CL - \Delta Cash + \Delta STDEBT$$

ΔCA : variation in the current assets

ΔCL : variation in the current debt

$\Delta STDEBT$: variation in the current maturing portion of the long-term debt

$\Delta Cash$: variation in cash

(Source: Ghorbani, Foroughi, 2013)

4.3. Control Variables

Firm Size (I-SIZE)

The natural logarithm of firm's assets is used to calculate firm size.

Size: the size of firm "i" at the end of year "t" (the natural logarithm of average assets is used as the firm size criterion).

Size= LoG (total assests)

Firm Age

The natural logarithm (Ln) of the firm establishment date untill the intended year of the research period (2017) is used to calculate the firm age in the present study.

Age=Ln (firm establishment date untill the intended year of the research period (2017))

5. RESEARCH MODEL

To investigate the effects of audit fees and risk on the firm's financial reporting quality, multiple linear regression models are used as follows.

According to the proposed hypotheses, the following models are used to test research hypotheses:

$$\text{Litigations } it = \beta_0 + \beta_1 (\text{Audit fees}) it + \beta_2 (\text{SIZE}) it + \beta_3 (\text{Age}) + \epsilon it$$

$$\text{Reporting delay } it = \beta_0 + \beta_1 (\text{Audit fees}) it + \beta_2 (\text{SIZE}) it + \beta_3 (\text{Age}) + \epsilon it$$

Litigations it = $\beta_0 + \beta_1$ (Audit risk it) + β_2 (SIZE) it + β_3 (Age) + ϵ_{it}

Reporting delay it = $\beta_0 + \beta_1$ (Audit risk it) + β_2 (SIZE) it + β_3 (Age) + ϵ_{it}

Where:

Audit fees it : represents audit fee of the firm “i” at year “t”

Audit risk it : represents audit risk of the firm “i” at year “t”

Litigations it : represents litigations of the firm “i” at year “t”

Reporting delay it : represents delay in the audit report of the firm “i” at year “t”

Size it : represents size of the firm “i” at the end of year “t”

Age it : represents the age of firm “i” at the end of year “t”

ϵ_{it} : represents model error

6. RESEARCH FINDINGS

Table 1- Descriptive statistics of research variables

Variables	Symbol	Number	Mean	Maximum	Minimum	Standard deviation
Financial reporting quality	TCA	19	1.29	5.58	-3.04	0.15
Litigations	Litigation	19	0.22	1	0	0.12
Audit Reporting delay	Reporting delay	19	3.75	5.16	2.28	1.52
Audit fee logarithm	Audit Fee Log	19	3.01	5.01	1.03	0.02
Audit risk	Audit Risk	19	0.48	1	0	0.43
Firm size	SIZE	19	14.66	24.76	8.58	1.57
Firm age	Age	19	3.14	5.45	1.13	1.43

The descriptive statistics table of variables for 39 family firms during the research method (2012-2017) is presented as table above.

6.1. Testing hypotheses

First hypothesis: there is a significant relationship between the audit fees and litigations of family firms.

In the combined regression model, audit fees have positive random effects on litigations (0.055), which is significant due to the probability t statistics of 0.028. In other words, audit fees have a positive significant effect on litigations. In addition, firm size and age also have positive significant influence on litigations. Given the positive significant effect of audit fee on litigations, the first hypothesis is accepted.

Table 2- the combined regression model of the random effects of audit fees on litigations

Model	Litigations it = $\beta_0 + \beta_1$ (Audit fees) it + β_2 (SIZE) it + β_3 (Age) + ϵ_{it}			
variables	Regression coefficients	t statistics value	t statistic probability	VIF statistics
Constant value	0.092	1.87	0.076	-
Audit fee	0.055	3.17	0.028	1.7635
Firm size	0.059	2.91	0.029	1.6715
Firm age	0.065	2.85	0.037	1.3956
The coefficient of determination	Adjusted coefficient of determination	F statistics probability	Durbin Watson statistic	Jarque-Bera probability
0.70	0.65	0.0008	2.08	0.1549

Second hypothesis: there is a significant relation between audit fees and reporting delay of family firms.

In the combined regression model, audit fees have constant negative effect on reporting delay (0.051), which is significant according to the probability t statistics of 0.019. This shows that audit fees have negative significant effect on reporting delay. Further, firm size and age have positive significant effect on reporting delay.

Table 3- the combined regression model of constant effects of audit fees on reporting delay

model	Reporting delay it = $\beta_0 + \beta_1$ (Audit fees) + β_2 (SIZE) it + β_3 (Age) + ϵ_{it}			
variables	Regression coefficients	t statistic value	t statistic probability	VIF statistic
Constant value	0.077	2.58	0.046	-
Audit fee	-0.051	-3.42	0.019	1.6757
Firm size	0.059	2.96	0.029	1.6715
Firm age	0.062	2.88	0.033	1.3956
The coefficient of determination	Adjusted coefficient of determination	F statistics probability	Durbin Watson statistic	Jarque-Bera probability
0.73	0.69	0.0007	2.09	0.1836

Third hypothesis: there is a significant relationship between the audit risk and litigations of family firms

In the combined regression model, audit risk has constant positive effect on litigations (0.053), which is significant given to the probability t statistics of 0.022. In other words, audit risk has a positive significant effect on litigations. Moreover, firm size and age also have positive significant effect on litigations.

Table 4- the combined regression model of constant effects of audit risk on litigations

model	Litigations $it = \beta_0 + \beta_1$ (Audit risk it) $+ \beta_2$ (SIZE) $it + \beta_3$ (Age) $+ \epsilon it$			
variables	Regression coefficients	t statistic value	t statistic probability	VIF statistic
Constant value	0.069	2.82	0.039	-
Audit fee	0.053	3.17	0.022	1.5759
Firm size	0.059	2.91	0.029	1.6715
Firm age	0.065	2.85	0.037	1.3956
The coefficient determinati	Adjusted coefficient determinati	F statisti probability	Durbin Watson statistic	Jarque-Bera probability
0.68	0.63	0.0003	2.01	0.1549

Fourth hypothesis: there is a significant relationship between the audit risk and reporting delay of family firms.

In the combined regression model, audit risk has constant positive effect on reporting delay (0.057), which is significant given the probability t statistics of 0.027. That is, audit risk has a positive significant effect on report delay. In addition, firm size and age also have positive significant effect on report delay.

Table 5- the combined regression model of the constant effect of audit risk on report delay

variables	Report lag $it = \beta_0 + \beta_1$ (Audit risk it) $+ \beta_2$ (SIZE) $it + \beta_3$ (Age) $+ \epsilon it$		
variables	Regression coefficients t	t statistics value	t statistics probability
Constant value	0.107	1.53	0.098
Audit fee	0.057	3.09	0.027
Firm size	0.059	2.96	0.029
Firm age	0.062	2.88	0.033
The coefficient determinati	Adjusted coefficient of determinati	F statistics probability	Durbin-Watson statistics
0.67	0.64	0.0005	1.98

7. CONCLUSION AND SUGGESTIONS

In analyzing hypotheses it can be noted that independent audit fees can be used as a criterion of the complexity of

firms' financial reporting. Examining the relationship between the audit fees and litigations in this hypothesis we seek to express this fact that investors, shareholders and other beneficiaries seek quality and at the same time with more limited risk information, and managers as their representatives seek to obtain the maximum possible rewards by enhancing their programs and performance and reducing the risk of information uncertainty. However, auditing play an important role as a communication bridge between these groups, so that receiving higher audit fee is indicative of a certain degree of confidence in management performance and the reward received by the manager, which should take the litigation rate related to the fees received by the auditors into account.

Finally, it can be stated that firm complexity is one of the factors contributing to the increase in auditors' fees. Firms with complex performance and structure pay managers more to operate the firm's performance. On the one hand, managers who provide more profit margins for the firm deserve to receive more rewards. The widespread and complex firm operation leads to an increased demand for monitoring the financial reporting process. Firms with complex operations require a lot of auditing services and consequently pay more fees to these auditing firms. Further, these firms also need non-obligated managers to monitor the auditing process; hence managers who are members of the auditing committee are paid with more rewards. In other words, it can be predicted that the increased complexity of the firm's operations results to an increase in managers' rewards, which is due to the increase in profit margin and increased complexity of financial reporting systems that influences and accelerates the issuance of audit report.

The results of the present research are in line with those of Sajadi et al. (2009), Darabi and Salmani (2013) and Deanjelo (1981), but contradicts those of Saghafi and ArabMaziyar Yazdi (2010), Khodaei Vole Zagherd and Yahyae (2010), Modares and Hesar Zadeh (2008) and Hoo and Kong (2010).

8. SUGGESTIONS FOR FURTHER RESEARCH

- Performing this study separately for various industries available in Tehran Stock Exchange to control the industry effect
- Investigating the effect of managers opportunistic behavior and audit risk on report delay of firms listed on Tehran Stock Exchange
- Investigating the effect of corporate governance and audit risk on financial reporting quality in helpless firms in Tehran Stock exchange
- Investigating the relationship between financial reporting quality and firm's cash
- Investigating the effect of economic conditions such as inflation and exchange rate fluctuations

on the relationships between audit fees and risk on financial reporting quality

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