The Effect of Investor Protection and the Securities Regulation on Audit Fees in the Listed Companies in Tehran Stock Exchange

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Abstract
Determination of Audit fees factor in the present world is one of the most challenging activity due to the fact that users are notably considering the financial statement of audit fees as a criterion for the acceptance of financial statements. Hence, addressing the affecting factors on audit fees is one of the important issues. Within Iran, few studies have been carried out in this field. The purpose of this study is analyzing the investor's protection factors and the securities regulation as independent variables on the audit fees determination as a dependent variable. For this purpose with reviewing of theoretical and research literature related to the mentioned factors, their effectiveness on audit fees was determined. The statistical population in this study are included all companies and institutions which are presented in Tehran Stock Exchange. By adopting the taken samples in the Cochran method, 73 companies were selected, amongst. The necessary data concerning the independent variables were obtained from the questionnaire through a field study and direct face to face interviews in the companies' premises. The method used for testing hypotheses is the multiple regression method. The obtained results have indicated that between the protections of investors and the audit fees there is a significant and positive relationship but there is no significant relation between the security rules and the audit fees.

Key words: Audit, Audit Fees, Investor Protection, Securities Regulation

Introduction
With the economic Globalization, the world of business and profession has undergone many changes. Globalization extends not only business but also to various professions thus demand for more accuracy is growing than the result of the professionals’ activities (Mojtahedzade & Aqai, 2004). Demand and supply of audit services are the basic factors that determine audit fees (e.g., Simunic, 1980). Audit demand depends upon several factors, which include the nature of the client's business, the complexity of the client's business, the firm size, and other firm-specific risk factors (e.g., Simunic & Stein, 1996). Thus, the firm-specific risk factors define the scope of audit and liability risk, which provide the basis to determine audit risk and, hence, the audit effort needed (e.g., Dye, 1993, 1995). Since the role of independent auditing is, validate and
transparent of the capital market. In case of determining the reference and final rate for it, such as other commercial goods, the expecting of consequences is not far from reality including some of audit institutions breaking the rate and decreasing quality of the audit. (Amani & Davani, 2009) to solve this issue, it should be considered remuneration in dignity of the audit profession which is proportional to the quality of rendered services, therefore, addressing the determinants factors of the audit fees and identifying factors which are affected on it, are the basic necessities. Audit fee models highlighting important determinants of audit fees from the demand and supply perspectives suggest that audit risk and audit effort play an important role in determining audit fees (e.g., Dye, 1993, 1995; Simunic, 1980). In the development of subjective literature about affecting (influencing) factors on the audit fees in the present study from the securities regulation of investor's protection have been used as influencing factors on the pricing of the audit services.

Jaggi and Low (2011) argue that the institutional factors of investor protection and securities regulations have a significant impact on audit fees because they play an important role in determining the litigation environment in a country, which, in turn, influences audit risk. It is argued in the literature that high investor-protection rights empower investors to sue management and auditors if an audit is found lacking and reported earnings are considered questionable (Francis & Wang, 2008). Leuz, Nanda, and Wysocki (2003) find that discretionary accruals are lower in countries with strong investor protection, which means that the quality of financial information on which the audit is performed is higher in countries with strong investor protection. Higher quality of information is likely to result in lower audit risk, and this may result in lower audit effort. Investor protection is an important determinant of earnings management around the world. Strong protection limits insiders' ability to acquire private control benefits and hence reduces their incentives to mask firm performance. Because they are forced to hide anything less than the external (e.g., Leuz et al., 2003)

Additionally, it is argued in the literature that audit specialists are generally more concerned with reputation cost, and this motivates them to conduct more extensive audits to ensure higher audit quality (e.g., Balsam, Krishnan, & Yang, 2003; Bedard & Biggs, 1991; Dunn & Mayhew, 2004; Krishnan, 2003; Wright & Wright, 1997). Thus, audit fees are generally higher when audits are conducted by specialists (e.g., Gul, Fung, & Jaggi, 2009). Strict securities regulations are positively associated with audit fees in countries with low investor protection. Strict securities regulations result in higher audit risk and higher audit risk in these countries and, hence, higher audit fees (Jaggi & Low, 2011). Bushman and Piotroski (2006) argue that stricter securities regulations provide strong incentives for good behavior by management as well as auditors. Because noncompliance of securities regulations may subject auditors to censures and penalties, they may result in higher audit risk (e.g., Goshen & Parchomovsky, 2006; Mahoney, 1995). We use the revised and updated La Porta et al.'s (1998) index from Pagano and Volpin (2005), which has also been used in earlier studies (e.g., Li, Moshirian, Pham, & Zein, 2006), to measure investor protection.

Hail and Leuz (2006) and Burgstahler et al. (2006) create an index of securities regulations (denoted as SECREG), and this is expected to represent the overall effectiveness of a country's securities regulations and also capture differences in the securities regulations across countries. In this study, we also adopt this SECREG as a proxy for securities regulations. Jaggy and Low in 2011 were examined the effects of investor's protection variables, and the securities regulation on the audit fees in respect of companies in 17 countries including America, England, Portugal,
Switzerland, Italy and ... . And they concluded that there is a significant positive relationship between the protection of investors and the audit fees, but regarding provisions of the securities it is different between supporting companies from Investor in bulk and component. So In countries in which the investor has little supported, there is the positive and meaningful relation between regulations of the Securities and the audit fees and in countries in which the investor has mainly supported, there is no correlation between the securities regulation and the audit fees.

Research Method

(1-3) Research hypotheses

First hypothesis: there is a significant relationship between the investors' protection and the audit fees.
Second hypothesis: there is significant relationship between the securities regulation and the audit fees.

(2-3) Research Methodology

This research has applied purpose, because the results can be used to determine the audit fees as well as codifying the regulation by regulatory organizations such as certified public accountants, the auditors Organization and the Securities and Exchange Organization. The Research Methods are included two parts of descriptive and analytical. In descriptive part through a library studies were extracted the questions of the questionnaire and with determining validity and reliability of the questionnaire, required data will be collected by questionnaire and in analytical part based on data collected by using of the multiple variable regression and the statistical tests, research hypotheses are tested and the results are reviewed.

(3-3) the research model and operational definition of variables

In this research according to Jaggy and Low (2011) to investigate the effect of investor's Protection variables and the Securities regulation on the audit fees is used following the regression model:

$$\text{LNFEE}_{it} = \beta_0 + \beta_1 \text{ANTIDIR}_i + \beta_2 \text{SECREG}_i + \beta_3 \text{BIG}_{it} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{LOSS}_{it} + \beta_7 \text{INVREC}_{it} + \beta_8 \text{ROA}_{it} + \beta_9 \text{DISCL}_{it} + \epsilon_{it}$$

Dependent variable
LNFEE= audit fees

Independent Variables
ANTIDIR= investor protection
SECREG= securities regulation

Control variables
BIG= Size (fame) Audit Institute
SIZE= Company size
LEV= total liabilities over total assets
LOSS = 1, if firm reports a net loss 0 otherwise
INVREC = sum of year-end inventories and receivables over total assets
ROA = year-end net income over total assets
DISCL = an index that measures financial disclosure of firms De Nicolò, Laeven, and Ueda (2008).

(4-3) Data collection tools
In this research to collect data which is related with the dependent variables and control were used from the site in Tehran stock exchange and financial statements of the companies. To determine the independent variables (the degree of investor's protection and the securities regulation) was used questionnaire.

(5-3) The statistical population
The statistical population of this present study consists of all listed companies in Tehran Stock Exchange.

(6-3) The statistical sample and sampling method
To determine the minimum required sample size, was used from the Cochran formula for the finite population. According to Cochran formula the minimum required sample size are 70 companies, but in order to achieve the number of required samples, 100 questionnaires should be distributed among the subjects. A simple random sampling method is used in this study.

(7-3) Statistical methods for testing hypotheses
Because the main purpose of this project is the effect of the investor's protection independent variable and the Securities regulations on the audit fees, therefore, in this research is used the multivariate regression by use of combining and cross-sectional data. for analyzing research data and testing hypothesis, will be used descriptive and inferential statistical methods in two ways. Also are used 6 EViews and 19 SPSS software for descriptive analysis of data and testing hypotheses and the extracting regression model.

(8-3) Examination of errors independence
In order to investigate the errors independence from each other is used Durbin-Watson test.

(9-3) Test appropriateness model
To test the suitability of the model are used F-statistic and significance level model (sig).

(10-3) Testing the significance of the coefficients
For testing the significance of coefficients were used StiveDanet T-test at a 5% of significance level.

Discussion and conclusions
(1-4) Descriptive statistics of data
Table (1) shows the descriptive statistics of the research variables. The whole observations after adjusting unqualified companies’ bytes and eliminating deviated data are equal to 73 companies.
Table 1
Descriptive statistics for firm-level variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNFEE</td>
<td>0.0051</td>
<td>0.0057</td>
<td>0.0025</td>
<td>0.0010</td>
<td>0.0090</td>
</tr>
<tr>
<td>ANTIDIR</td>
<td>2.5890</td>
<td>3.0000</td>
<td>1.5972</td>
<td>0.0000</td>
<td>5.0000</td>
</tr>
<tr>
<td>SECREG</td>
<td>0.4714</td>
<td>0.4583</td>
<td>0.2733</td>
<td>0.0021</td>
<td>0.9832</td>
</tr>
<tr>
<td>BIG</td>
<td>0.5205</td>
<td>1.0000</td>
<td>0.5030</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>SIZE</td>
<td>12.3213</td>
<td>12.3019</td>
<td>1.8306</td>
<td>9.4843</td>
<td>15.3411</td>
</tr>
<tr>
<td>LEV</td>
<td>0.3704</td>
<td>0.3680</td>
<td>0.1013</td>
<td>0.2005</td>
<td>0.5461</td>
</tr>
<tr>
<td>LOSS</td>
<td>0.3562</td>
<td>0.0000</td>
<td>0.4822</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>INVREC</td>
<td>0.2750</td>
<td>0.2698</td>
<td>0.0793</td>
<td>0.1377</td>
<td>0.3947</td>
</tr>
<tr>
<td>ROA</td>
<td>0.1956</td>
<td>0.1988</td>
<td>0.0589</td>
<td>0.0835</td>
<td>0.2885</td>
</tr>
<tr>
<td>DISCL</td>
<td>54.2603</td>
<td>53.0000</td>
<td>26.6239</td>
<td>11.0000</td>
<td>99.0000</td>
</tr>
</tbody>
</table>

(2-4) normal distribution of research variables test

Table 2. Kolmogorov- Smirnov test

<table>
<thead>
<tr>
<th>Result</th>
<th>p-value</th>
<th>Kolmogorov- Smirnov (z)</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>normally distribution</td>
<td>0.057</td>
<td>0.185</td>
<td>LNFE</td>
</tr>
</tbody>
</table>
Since the significance levels for all variables are more than 0.05 then with 95% confidence we can say that above variable has normal distribution.

(3-4) Errors independence Test

Table 3. Errors independence Test

<table>
<thead>
<tr>
<th>Durbin-Watson Statistic</th>
<th>Modified Determination Coefficient</th>
<th>Determination Coefficient</th>
<th>Regression model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.721</td>
<td>0.676</td>
<td>0.737</td>
<td>First and second hypothesis model</td>
</tr>
</tbody>
</table>

Considering above table the amount of Durbin - Watson statistic is located at a distance 1.5 and 2.5 for the regression models. Thus, it is confirmed no correlation assume between errors.

(4-4) research hypotheses test

Results derived from the analyzing regression equation are presented in Table 4. The amount of p-value and also the amount of F statistic indicates the significance of the total regression model. Determination Coefficient and Modified Determination Coefficient of the mentioned model are respectively 73.7% and 67.6 percent. Thus, we can conclude that in the above regression equation, only about 73.7% of the amount of changes in the fees of the assessed firms be explained by the above independent and controlled variables.

Table 4: Results derived from the regression equations

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Amount of Coefficient</th>
<th>Variable Coefficient</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed number</td>
<td>3.641</td>
<td>β0</td>
<td>2.873</td>
</tr>
<tr>
<td>ANTIDIR</td>
<td>6.034</td>
<td>β1</td>
<td>5.073</td>
</tr>
<tr>
<td>SECREG</td>
<td>-0.247</td>
<td>β2</td>
<td>-0.35</td>
</tr>
<tr>
<td>BIG</td>
<td>3.215</td>
<td>β3</td>
<td>2.141</td>
</tr>
<tr>
<td>SIZE</td>
<td>4.311</td>
<td>β4</td>
<td>2.601</td>
</tr>
<tr>
<td></td>
<td></td>
<td>β</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>-----</td>
<td>---</td>
</tr>
<tr>
<td>2.847</td>
<td>1.736</td>
<td>β&lt;sub&gt;5&lt;/sub&gt;</td>
<td>LEV</td>
</tr>
<tr>
<td>2.871</td>
<td>3.712</td>
<td>β&lt;sub&gt;6&lt;/sub&gt;</td>
<td>LOSS</td>
</tr>
<tr>
<td>2.342</td>
<td>3.268</td>
<td>β&lt;sub&gt;7&lt;/sub&gt;</td>
<td>INVREC</td>
</tr>
<tr>
<td>-2.380</td>
<td>-1.421</td>
<td>β&lt;sub&gt;8&lt;/sub&gt;</td>
<td>ROA</td>
</tr>
<tr>
<td>2.619</td>
<td>0.5327</td>
<td>β&lt;sub&gt;9&lt;/sub&gt;</td>
<td>DISCL</td>
</tr>
<tr>
<td>19.761</td>
<td></td>
<td></td>
<td>F statistic</td>
</tr>
<tr>
<td>0.000</td>
<td></td>
<td></td>
<td>P-) Significant (Value</td>
</tr>
<tr>
<td>1.721</td>
<td></td>
<td></td>
<td>Durbin-Watson Statistic</td>
</tr>
</tbody>
</table>

**Coefficient determination**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.737</td>
<td>Modified coefficient of determination</td>
<td></td>
</tr>
</tbody>
</table>

**Modified coefficient of determination**

(5-4) first hypothesis test

“There is a significant relation between investor's protection and the audit fees” Test result: in accordance with Table 4, the absolute values of t-statistics which is related to investor's protection index variable (ANTIDIR), is more than t-statistics obtained from the table with the same degree of freedom. Therefore at the 95% confidence level can be argued that there is a significant relation between the investor's protection and the audit fees, so the first hypothesis is confirmed. On the other hand due to the positive sign of the investor's protection index variable in the regression model can be argued that, there is a direct significant relation between the investor's protection variable and the audit fees. This result is corresponded with consequence of Jaggy and Low (2011) that the relation between investor's protection and the audit fees are the same which were deduced meaningful and directly.

(6-4) second hypothesis test

“There is significant relation between the securities regulation and the audit fees” Test result: According to Table 4, the absolute values of t-statistics related to the securities regulation variable (SECREG); is less than t-statistics was obtained from the table with the same degrees of freedom. Therefore at the 95% confidence level can be claimed that between the securities regulation and the audit fees there is no correlation, therefore the second hypothesis is rejected. About this hypothesis, by considering to the major supporting from investors in companies' premises in Tehran Stock Exchange such as Jaggy and Low (2011) there is no major significant relation between the securities regulation and the audit fees of the investor's sponsoring companies.
References

Economy, 106, 1113–1155.