Investigation the effect of audit quality on relationship between ownership structure and audit fee in Tehran stock exchange

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Abstract

Audit fees of the important issues that preoccupied the mind of the client and the auditor. And it should be negotiated clearly. Various factors could affect the audit fees. One of these factors could be pointed to the audit quality and ownership structure. The main question is whether audit quality research on the relationship between ownership structure and audit fees has a significant effect? For this purpose, the data required for this study of 102 companies Tehran Stock Exchange, in the period 1389 to 1393 were collected. Statistical methods used to test the hypotheses is multiple regression. This study includes three hypotheses. The finding show that audit quality has a significant impact on relationship between institutional ownership and managerial ownership with audit fee. Also the finding show that audit quality has a significant impact on relationship between institutional ownership and ownership concentration with audit fee. The results also showed that the relationship between ownership concentration significant impact on audit quality and audit pricing right-not.

Keywords: institutional ownership, managerial ownership, ownership concentration, audit quality, audit fee.
Introduction

With the increase in management sources, the number of beneficiaries in connection with the firm increases that the consequence of such conditions is the conflict of interests. As a result of conflicts of interests, the beneficiaries should incur the cost of agency for accommodating the interests of others with themselves or minimizing the effects of the conflict of interests. Manager that is at the heart of this conflict of interests, tries to reduce this cost by presenting the financial information of the firm, but due to the management authorities, he raises the need to monitor the performance of the manager, professional judgment of independent auditor. To use auditing services, an amount of money must be paid as a remuneration of audit services. This amount is determined by auditor and according to his/her risk assessment and the volume of audit.

The relationship between audit remuneration and audit quality has dedicated much of the accounting research to itself; but a large number of research has been focused on the possibility of the distortion of auditor’s independence as a result of the auditor's economic dependence to the client due to the receiving high remunerations. The higher, the remuneration paid to auditors increases, the more the auditors may also try and consequently, the quality goes up. Understanding the factors leading to accommodating the level of audit quality by auditor, has attracted the attention of many researchers, creditors and stockholders. One of these factors which attracts more attention than other factors, is the economic dependence between auditor and the employers. The remuneration paid by audit institutions consists of three parts; first, inherent audit costs, then expected costs and finally, the profit of audit institution. Employers are hoping to reduce the cost of reporting systems and in contrast, auditors are hoping to earn reasonable profit by conducting audit and audit remuneration is the result of maximizing the interests of two parties and the auditor’s unusual remuneration is the difference between the actual remuneration of the auditor and normal level of the audit remuneration which is expected to pay for it.

A skillful and independent audit institution is able to know the investigated misrepresented financial statements and can affect its employer in terms of the correct presentation of it and finally, the reliable financial information are reported. Achieving this desired goal, completely depends on the features of audit institutions and these features are related to the audit quality negatively or positively.

Literature review

National research

Salehi et al. (2013) investigated the relationship between audit remuneration and the financial performance of firms in their research. In this research, the performance indicators includes power of profit, return on assets, return on equity and Tobin’s Q ratio. The results showed that there is no significant relationship between the audit remuneration and indices of performance.

Hesas yeganeh et al., (2014), in a study entitled the relationship between the corporate governance and discretionary and non-discretionary accruals in the firms listed in Tehran stock exchange, concluded that there is a significant and direct relationship between the ownership
structure of firms and non-discretionary accruals, and there is a significant and reverse relationship between discretionary accruals and ownership structure.

Rajabi et al., (2015), in their research, have investigated the relationship between independent audit remuneration, the quality of profit and board of director’s independence in the firms listed in Tehran stock exchange. The results of the research showed that there isn’t significant relationship between audit remuneration, the quality of audit and board of director’s independence. Also there are no significant relationships between the financial leverage variables, loss of the company in the previous fiscal year and return on assets and the pricing of audit services.

International researches

Lee and Bai (2012), in their study, concluded that there is a direct relationship between the quality of audit and audit remuneration, and there are reverse relationships between it and accruals and correction of errors and the relationship between the quality of audit and audit remuneration is more significant.

Ben Ali and Lesyj (2012) investigated the relationship between the type of controlling shareholders and audit remuneration. The results of their research show that there isn’t significant relationship between family ownership and audit remuneration, but there is a positive and significant relationship between institutional and state ownership and audit remuneration.

Zyngz (2012) investigated the level of corporate governance and audit remuneration which is carried out based on the data of Chinese firms. The results showed that there is a negative relationship between the level of corporate governance and audit remuneration. The higher the level of corporate governance, the lower the audit remuneration will be.

Research hypotheses

1. The size of audit institution has a significant effect on the relationship between institutional ownership and audit remuneration.
2. The size of audit institution has a significant effect on the relationship between state ownership and audit remuneration.
3. The size of audit institution has a significant effect on the relationship between the ownership concentration and audit remuneration.

Methodology

This research was performed based on actual data of stock market and audited annual financial statements of firms listed in Tehran stock exchange. In this research, the required financial information is obtained from audited financial statements and associated notes about the studied companies and with the use of CD provided by Tehran stock exchange. To develop the literature and research background, the library method has been used and the theoretical principles of the research were collected from books and Persian and Latin professional journals.
First, using the list of the companies listed in Tehran stock exchange, the samples of research are selected from the beginning of 2010 until the end of 2014. Then, the variables of research are collected and computed for the selected companies in each of the studied years. After the collection of required data, the Excel and Eviews 8 software are used to analyze the data.

**Research model**

With regard to the theoretical principles and literature review, the following pattern is used to test the research hypotheses.

\[
\ln(Y) = \beta_0 + \beta_1 \text{MO} + \beta_2 \text{IO} + \beta_3 \text{OWNC} + \beta_4 \text{MO} \times \text{BIG4} + \beta_5 \text{IO} \times \text{BIG4} + \beta_6 \text{OWNC} \times \text{BIG4} + \\
\beta_7 \text{SIZE} + \beta_8 \text{LEVE} + \beta_9 \text{ROA} + \beta_{10} \text{GROTH} + \epsilon
\]

Where in this model:

- LNREMUNERATION: is the natural log of audit remuneration;
- MO: managerial ownership;
- IO: institutional ownership;
- OWNC: ownership concentration;
- BIG4: the size of audit institution;
- SIZE: the firm size;
- LEVEL: the financial leverage;
- ROA: return on assets;
- GROTH: growth rate.

**Population and sample**

Sample includes 102 companies of 478 companies listed in Tehran stock exchange in 2010-2014. Selecting the sample of research was begun through the website of Tehran stock exchange by observing a year that the company was listed in the stock exchange.

**The analysis of research model**

To estimate the first research model during the period of 2010-2014 in the framework of combined data, Chow bound test is firstly used. This test determines the use of the Pooled model or the fixed effects model. If the $F$-statistic is significant at the error level of 5 percent, the null hypothesis (Pooled model) is rejected and fixed effects model is confirmed. The results of Chow test are presented in table 4-4:

<table>
<thead>
<tr>
<th>Description</th>
<th>Statistic F</th>
<th>The significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow test for assessing the model</td>
<td>3.732</td>
<td>0/000</td>
</tr>
</tbody>
</table>

As can be seen in table 4-4, the $F$-statistic is significant at the error level of 5 percent, therefore; the Chow test strongly rejects the resemblance of intercept in all periods. In the next phase, fixed effects method is tested against to random effects method. To do this, Hausman test has been
used. If computational statistic is significant at the error level of 5 percent, random effects hypothesis will be rejected and the model of fixed effects is confirmed. In order to study the selection of estimation method, the results of Hausman test are presented in table 5–4.

Table (5-4): Hausman test

<table>
<thead>
<tr>
<th>description</th>
<th>The test statistic</th>
<th>The significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hausman test for assessing the model</td>
<td>7.92</td>
<td>0/72</td>
</tr>
</tbody>
</table>

Regard to table (5-4), the computational statistic of Hausman test is not significant at the error level of 5 percent, therefore; lack of relationship between individual effects and explanatory variables is confirmed. Hence, the method of random effects will be used to estimate the model.

Estimation results of research model

Table (6-4) shows the estimation results of the parameters of research model. For this model, the Durbin-Watson-statistic is equal to 1.862 that autocorrelation of error term is rejected at the error level of 5 percent. The probability related to F-statistic, to modify the model, is equal to 0/000 which is lower than 5 percent. Therefore, the null hypothesis based on the error of model modification is rejected. As a result, at the level of 95 percent, the significance of the model is accepted. The adjusted R² is equal to 0.363. This statistic indicates that about 36 percent of the changes of dependent variable can be explained by independent and control variables. Given that the statistics of the model were accepted, the research hypotheses are investigated.

Table (6-4): estimation results of the research model

<table>
<thead>
<tr>
<th>variable</th>
<th>Test statistic</th>
<th>coefficient</th>
<th>Error probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO*BIG</td>
<td>4.474</td>
<td>0.734</td>
<td>0/000</td>
</tr>
<tr>
<td>IO*BIG</td>
<td>9.136</td>
<td>1.148</td>
<td>0/000</td>
</tr>
<tr>
<td>OWN*BIG</td>
<td>-0.692</td>
<td>-0.011</td>
<td>0/337</td>
</tr>
<tr>
<td>Size of audit institution</td>
<td>-0.639</td>
<td>-0.185</td>
<td>0/000</td>
</tr>
<tr>
<td>Growth rate</td>
<td>-0.451</td>
<td>-0.031</td>
<td>0/652</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>-1.029</td>
<td>-0.149</td>
<td>0/304</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>3.048</td>
<td>0.422</td>
<td>0/002</td>
</tr>
<tr>
<td>-------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Managerial ownership</td>
<td>-1.058</td>
<td>-0.117</td>
<td>0/291</td>
</tr>
<tr>
<td>Ownership concentration Return on assets</td>
<td>0.562</td>
<td>0.190</td>
<td>0/588</td>
</tr>
<tr>
<td>Firm Size</td>
<td>8.107</td>
<td>0.242</td>
<td>0/000</td>
</tr>
<tr>
<td>intercept</td>
<td>38.152</td>
<td>16.552</td>
<td>0/000</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>( \text{Adjusted } R^2 )</td>
<td>0.377</td>
<td>0/363</td>
</tr>
<tr>
<td>F-Statistic</td>
<td>Probability of F-statistic</td>
<td>27.065</td>
<td>0/000</td>
</tr>
<tr>
<td>Durbin-Watson-statistic</td>
<td></td>
<td>1.847</td>
<td></td>
</tr>
</tbody>
</table>

**First hypothesis test:**

The first research hypothesis is developed as follows:

Size of the audit institution has significant effect on the relationship between institutional ownership and audit remuneration.

The probability of error level related to null hypothesis, i.e. the lack of the impact of the size of the audit institution on the relationship between institutional ownership and audit remuneration, is equal to 0.000 which is smaller than 0.05, therefore, with the confidence level of 95 percent,
the null hypothesis is rejected. Also the coefficient of the variable IO * BIG4 is 1.148. Regard to being positive of the coefficient, it can be concluded that size of the audit institution has positive and significant effect on the relationship between institutional ownership and audit remuneration.

Second hypothesis test:

The second research hypothesis is developed as follows:

Size of the audit institution has significant effect on the relationship between managerial ownership and audit remuneration.

The probability of error level related to null hypothesis, i.e. the lack of the impact of the size of the audit institution on the relationship between managerial ownership and audit remuneration, is equal to 0.000 which is smaller than 0.05. Therefore, with the confidence level of 95 percent, the null hypothesis is rejected. Also, the coefficient of the variable MO*BIG4 is 0.736. Regard to being positive of the coefficient, it can be concluded that size of the audit institution has positive and significant effect on the relationship between managerial ownership and audit remuneration.

Third hypothesis test:

Third research hypothesis is developed as follows:

The size of the audit institution has positive and significant effect on the ownership concentration and audit remuneration.

The probability of error level related to null hypothesis, i.e. the lack of the impact of the Size of the audit institution on the relationship between the ownership concentration and audit remuneration, is equal to 0.337 which is bigger than 0.05. Therefore, with the confidence level of 95 percent, the null hypothesis is confirmed. So, it can be concluded that size of the audit institution has significant effect on the relationship between the ownership concentration and audit remuneration.

Conclusion

In this study, the impact of the size of the audit institution on the relationship between structure of the ownership and audit remuneration was studied. The first and second hypothesis of this study which are based on significant effect of the size of the audit institution on the relationship between institutional ownership and managerial ownership w and audit remuneration are approved.

Managerial and institutional investors, given their inherent characteristics, have special influence and can use them for monitoring and accommodating the performance of the manager in the line of shareholders’ interests. Presence of managerial and institutional investors in the structure of the company’s ownership has impact on monitoring the enterprise’s operations. For this reason, managerial and institutional investors try to use the high quality audit services. This leads to employing auditors with high quality and consequently, paying higher audit remuneration that hiring of such eminent auditors is the result of this process.
The results of this research showed that industrial proficiency of audit institution has effect on audit remuneration because an expert auditors conduct the audit operations in a shorter time with greater confidence. Therefore, the remunerations paid by these institutions are higher and on the other hand, the audit quality of these institutions is greater than other audit institutions.

The third hypothesis of this study investigates the effect of the size of the company on the relationship between the ownership concentration and audit remuneration. Results of this hypothesis test indicates that the size of the audit institution hasn’t significant effect on the relationship between the ownership concentration and audit remuneration.
References


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