The Relationship Between Audit Fees and Capital Structure Decisions in Companies Listed in Tehran Stock Exchange

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ABSTRACT

Quality of audit report is very important that is preoccupied the auditee and the auditor’s mind. Several factors may affect the quality of the audit report. One of these factors is audit fees that has the role of creditor in the financial statements for all its users. The theme of this study was to investigate the relationship between audit fees and capital structure decisions in the listed companies in Tehran Stock Exchange. For this study, 70 companies listed on Tehran Stock Exchange (in the period 2010 to 2014) were examined. The research method is descriptive and in terms of objective criteria (research type) is applied, so ultimately all shareholders, analysts and investors can use the results. Study literature was collected by library studies and financial data was extracted from financial statements and extracted, summarized and calculated by excel and analyzed by Eviews. According to the statistical procedures conducted in the 95% reliability using regression analysis the results showed that there is a significant positive relationship between audit fees and capital structure decisions.

Keywords: Audit quality, audit fees, capital structure and financial leverage.

1. INTRODUCTION

Financing is divided based on different points of view. These resources are divided into two categories, financial resources without cost and financial resources with cost. Financial resources with costs include pre – payment from customers, business creditors, payable dividends and payable expenses. Financial resources with the cost are divided into two categories, internal resources (such as accumulated profit, accumulated depreciation, prudential and legal reserves, reduction of current assets and fixed stagnant assets sale) and external resources (such as long and short term bank facilities, issuing bonds and issuing
new shares). Financing through a debt due to tax savings and its lower rate compared with the expected return of shareholders, is a better solution to finance.

The main goal of the capital structure determination policy is to determine the composition of financial resources in order to maximize shareholder wealth, although this depends on many factors. Capital structure determination policy help managers to determine profit value before interest and required tax in order to avoid profit reduction of any share about ant financing plans. Also, by calculating the financial risk of each financing programs we can choose a method that leads to optimum combination of risk and return (Naeem Pour et. al., 2012). Capital structure of firms in are varied in different countries thus manager have to use different factors such as economic and corporate features when making decision about optimal combination of capital structure as well as consider decision making related to financing and consequences of such factors for capital structure (Baral, 2004). On the other hand, in order to reduce the problems associated with risk-taking and information asymmetry, creditors called for higher returns and create more conditions for these companies in financial contracts. Indeed, what is important for creditors to grant credit and loans is borrower’s ability to pay the principal and interest of the loan, respectively. Generally one of strategies creditors use to assess the ability to pay principal and interest of the loan is addressing financial statements and the quality of financial reporting (Garcia – Teruel et. al., 2014). Because management is separate from ownership, there is no way to monitor manager’s performance and due to information asymmetry and profit conflict among different groups, there is possibility to present biased reporting. Thus independent audit services may be used as independent observers on management performance and reporting mechanism in order to reduce this uncertainty and increasing the reliability and relevance of financial statements (Ebrahimii Kordlar et. al., 2014, 110). Auditor gives “reasonable assurance” that the financial statements do not have “significant deviation”. The auditor moderates the adverse effects of the separation of ownership from management by reducing the information asymmetry between users and producers of the financial statements (Fernando et. al., 2010); thus the auditing can be a tool to reduce the risk of information for users of financial statements, particularly creditors.

It has long been argued that agency problems can affect financing decisions. Jensen and Meckling (1976) argue that self-interested managers often look for ways to reduce the likelihood of transfer of wealth from the creditor to shareholder. Eliminating conflicts of interest between managers, owners and debtors (agency conflict), has increased the demand for quality auditing. They also believe that an independent audit would increase the credibility of financial statements. In general, larger auditing firms are more motivated to run high-quality audit in an auditing pricing with a high quality. Beaty (1989) shows that when audit fees are higher than expected, suggests providing quality audit by the auditor’s more effort. In general, higher fees payment is in order to higher audit quality (Bhatia et. al., 2015, p. 2). Considering the importance of audit quality and impossibility of audit services direct observation, finding an effective way to control audit quality is essential. The most important aspect of the control and audit quality is audit fees. Fees for audit services is an essential condition for confidence to audit quality. Although more audit fee doesn’t always represents the cost of ever higher quality audit, but in addition to adequate audit quality having appropriate audit firms consider a standard cost to do their work that naturally the fees they receive is greater than the costs (Vaez et. al, 2014, p. 93). Therefore, the main objective of this study was to investigate the relationship between audit fees and capital structure decisions.
2. THEORETICAL BACKGROUND

Research shows that there has been demand for audit before legal obligation. One of the most important applicants for audit quality are the creditors. Indeed, what is important for creditors to grant credit and loans is borrower’s ability to pay the principal and interest of the loan, respectively. Generally one of strategies creditors use to assess the ability to pay principal and interest of the loan is addressing financial statements and the quality of financial reporting. As institutions that receive more audit fees, provide quality services and this leads to accreditation of financial statements. Given that about creation of debt what is important to creditors is ability to pay principal and interest and paid credits by the borrower credit and it is possible to recognize the ability to pay financial obligations by loan taker in terms of financial statements and companies financial reporting quality, audit fees can affect capital structure of the companies.

3. LITERATURE REVIEW

Internal Background

Mirzaeian (2011) conducted a study entitled “Effect of Audit Quality on financing decisions”. Therefore, in this study, 271 (for the first hypothesis) and 275 (second hypothesis) Iranian company in seals from 2005 to 2009, were selected as samples taking into account the conditions of the study. Research hypotheses include two hypotheses, (i) a significant relationship between audit quality and corporate financing decisions, and (ii) a significant relationship between audit quality and the total financing. The results showed a weak significant relationship between audit quality and type of financing but the second hypothesis was rejected.

Hossein Nejad Chenarbon (2012) studied “the effect of capital structure on the auditor”. In fact, the purpose of this study was to get an answer to the question of whether factors such as capital structure, profitability index, reported losses, firm size, leverage ratio, ownership type, auditor’s term of office effect the auditor selection in listed companies in stock exchange? The data of this study were collected by studying structural and financial features of 144 stock exchange companies in 9 consecutive years. The data was analyzed by correlation method and logistic regression. Results from seven hypotheses proposed in this study show that auditor’s term of office and governmental ownership structure and/or private structure of companies can affect the selection of auditor and there is no significant relationship between capital structure, profitability, losses reports, audit’s fees, firm size and auditor selection.

Hashemi and Jalali Moghadam (2013) in a study entitled “The impact of accruals on the relationship between external financing and future stock returns” investigated the effect of accruals on the relationship between external financing and modified future return according to the size of stock. For this purpose, a sample of 80 companies listed in Tehran Stock Exchange during period of 2005 to 2011 were examined. The results showed that there is a positive and significant relationship between accruals and future stock returns. External financing, which is associated significantly with future stock returns which these results are not consistent with the theoretical foundations. Then by adding accruals to the relationship between external financing with future stock returns, the results changed and the negative and significant relationship was created that reflects the anomalies of external financing, so considering investors to accruals, external financing at the same time is important.

Rezaei and Hemat far (2014) studied “The relationship between proper and improper accruals quality and information asymmetry with respect to financial leverage and firm size in Tehran Stock Exchange
member firms”. For this purpose, a sample consisting of 67 companies listed on the Tehran Stock Exchange, for the period during 2008 to 2012 were examined. First, variables identified and in order to analyze data, data mined from Rah Avard Novin software was used and the necessary calculations performed by the Excel 7 software. They analyzed the test of hypothesis using SPSS software. They results showed no significant relationship between quality of accruals including proper and improper accruals quality and information asymmetry in Tehran Stock Exchange.

4. FOREIGN BACKGROUND

Costello and wittenberg- mermar (2011) studied “the impact of financial reporting quality on debt contracts: Evidence from reports of internal control weaknesses”. Their considered the impact of financial reporting on selection of limiting conditions in debt contracts by creditors and found that when internal controls of the company are weak, creditors decrease conditions based on financial ratios and use options such as collateral, the interest and performance evaluation based on customers’ credit ratings.

Minnis (2011) in a study entitled “verifiers value of financial statements in financing through debt” studied how the financial statements verifiability affect interest rates of the debt. He examined a group of American firms that the financial statements audit was not compulsory for them, and came to the conclusion that companies with audited financial statement, have significantly less debt cost and creditors, consider greater value to the audited financial statement for setting interest rates. He provides new evidence that the audited financial statements have greater information content and their accruals predict the future cash flows in a more accurate manner and it would significantly affect the decisions of creditors.

Behrouzi and colleagues (2013) conducted a study entitled “The relationship between audit fees and timeliness of accounting information”. Their results showed that the factors affecting timely audit reports on listed companies in Tehran Stock Exchange are audit fees, the type of auditor, audit firm size, type of auditor's opinion and losses of the company.

Garcia Teruel and colleagues (2014) studied “the role of accruals quality in obtaining bank financing facility”. To this end, 1281 company during the years 2005-1988 were examined. Two-stage least squares regression model used to test their assumptions. The results showed that a significant relationship exists between the quality of accruals and bank financial liabilities. Transparency and accuracy of profits, reduces the information asymmetry between banks and enterprises pave the way to access bank loans.

Komera and P. J (2014) conducted a study entitled “the selection of capital structure, information asymmetry and debt capacity”. They tested the relevance of the theory of capital structure hierarchies among emerging companies that have debt concerns in terms of capacity. For this purpose, listed companies on the Stock Exchange of India during the years 2011-1992 were analyzed. The results showed that the weaker order of hierarchy theory among the companies studied, the higher costs of information asymmetry and this case is better for companied that don't have concerns about debt capacity. In general, the results showed that the hierarchy theory cannot explain the financing selection of companies surveyed.

Gao and Zhu (2015) studied “the asymmetry of information and capital structure around the world”. For this purpose they examined 90514 financial data of year – company from 13019 companies of 39 countries. Their aim was to investigate the effects of information asymmetry on financial decisions. The results showed that information asymmetry affect the company’s leverage, probably due to increased
information asymmetry, the cost of capital through issuing of shares is more than debt. According to Gao and Zhu (2015) companies that have less information asymmetry, have better access to finance through debt.

Bhatia et al., (2015) studied “the audit fees and capital structure decisions”. For this purpose they examined financial data from 134263 year - company during the period 2012 to 2001. Their findings revealed that companies that paid more fees for audit, have more willing to leverage (debt financing). In addition, findings revealed that companies paid more fees to audit have a greater tendency to bond relative to financial leverage. Overall, their findings suggest that audit fees a substantial role in capital structure decisions.

5. METHODOLOGY

Given that the results of this study may attract financial managers, investors and other stakeholders in decision making, thus this research is applied in terms of the goal. In addition, this study is kind of descriptive – correlative in terms of content and research method because it investigates the relationship between several variables. All companies listed on Tehran stock exchange create the sample of this study. We used systematic removal method to choose the sample. The companies with the following characteristics were selected: (1) are present in exchange from 2009 to 2014. (2) Firms are not the banks and financial intermediation, leasing and other investment companies. (3) In order to compare the data, their fiscal year ending is 20 March. (4) Don’t have trading interval more than 4 months. (5) Data and information is complete.

Assumptions and Relevant Model

There is a significant relationship between audit fees and capital structure.

\[
\text{Lev}_i = a + \beta_1 \text{AF}_i + \beta_2 \text{SIZE}_i + \beta_3 \text{MB}_i + \beta_4 \text{PPENT}_i + \epsilon_i
\]

LEVe = Leverage of company \(i\) in period \(t\);
AF\(_i\) = audit fee of company \(i\) in period \(t\);
SIZE\(_i\) = size of company \(i\) in period \(t\);
MB\(_i\) = Market value to assets book value of company \(i\) in period \(t\);
PPENT\(_i\) = assets visibility of company \(i\) in period \(t\);
\(\alpha\) = Constant value of the model
\(\beta\) = Constant value of variables
\(\epsilon_i\) = Error rate of the model

Research Variables and Measuring Methods

**Dependent variable:** In this research, capital structure, financial leverage is considered as the dependent variable which is calculated by dividing total debt by book value of assets following the Nikbakht and Pekani (2009) research.

**Dependent variable:** Dependent variable of this study is audit fees which audit fees natural logarithm is used to homogenize it with other variables.
Control variable:

1. **The firm size:** to calculate the variable, natural logarithm of annual net sales of the company is used.

2. **The ratio of market value to book value of assets:** for this variable, the ratio of market value to book value of assets is used.

   The ratio of market value to book value of assets represents a prospective variable and also is manager’s perceptions of the value of the company that could have an impact on investment (Sadidi and Mohammadi Sanyani, 2014).

3. **Assets visibility:** to calculate assets visibility, the ratio of assets to the total asset is used.

**Statistical Methods**

F Leamer test and Hausman test were used to determine mixed data type and $t$-test was used to determine the significance relationship between any dependent and independent variable and F-test with some difference also was used to test significance general relationship of regression equations. Modified Determination coefficient $R^2$ will applied to relationship between dependent and independent variables. For analyzing results and data mining, Excel and Eviews and Stata software will be used.

**Research Findings**

Analyzing information is a main part of research process. In other words, in this section researcher uses different analyzing methods to answer research question or decide to reject or confirm the hypothesis of the study.

**Descriptive Statistics**

Table 1 shows descriptive statistics of the main variables of the model for the 70 sample companies, over 5 years which indicate descriptive parameters for each variable separately. These parameters generally include information about the central indices such as mean, median, maximum, minimum, and information about dispersion indices such as standard deviation, skewness and kurtosis. The most important central Index is median, which reflects the equilibrium point and the distribution center of gravity and is perfect for showing the centrality of data. For example, the mean of firm size variable is equal to 13.2914 suggesting that much of the data for that variable focuses on this point. The median is one of the central indices that shows the status of the community. As table 1 shows, the median of asset visibility variable is 0.3077 and firm size variable is 13.3769, shows that half of the data is less than this amount and half are greater than this amount. In general, distribution parameters, are the criteria for determining the distribution of the data from each other or the distribution of data compared to the median. One of the most important distribution parameters is the standard deviation. The amount of this parameter for firm size is 1.3014. The asymmetry rate of the frequency curve is called skewness. If the coefficient of skewness is zero, society is completely symmetric and if the coefficient is positive, skeweness tends to the right and left if there will be negative skewness. Skewness of all variables is positive. Ratio of market value to book value of assets variable has the most skewness that is deviated from the center of symmetry. Kurtosis rate of frequency curve relative to curve that is the normal variable is called Kurtosis. If the Kurtosis is nearly zero, frequency curve will
be in normal situation in terms of kurtosis. If this value is positive, the curve is highlighted and if it is negative, the curve is flat. Kurtosis of all the variables of the model is positive. Ratio of market value to book value of assets variable has the most prominence and assets visibility variable is the least prominent relative to normal curve.

### Table 1
**Descriptive statistics of variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Max</th>
<th>Min</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital structure</td>
<td>0.6337</td>
<td>0.6235</td>
<td>1.6605</td>
<td>0.0657</td>
<td>0.2255</td>
<td>0.4407</td>
<td>4.5743</td>
</tr>
<tr>
<td>Audit fees</td>
<td>6.5609</td>
<td>6.4512</td>
<td>9.6068</td>
<td>4.6728</td>
<td>0.8877</td>
<td>0.7861</td>
<td>3.9662</td>
</tr>
<tr>
<td>Firm size</td>
<td>13.2914</td>
<td>13.3769</td>
<td>18.0529</td>
<td>8.8997</td>
<td>1.3014</td>
<td>0.1152</td>
<td>4.5569</td>
</tr>
<tr>
<td>Ratio of market value to book value</td>
<td>1.6250</td>
<td>1.4073</td>
<td>6.5275</td>
<td>0.4898</td>
<td>0.7544</td>
<td>2.2386</td>
<td>10.1282</td>
</tr>
<tr>
<td>Assets visibility</td>
<td>0.3496</td>
<td>0.3077</td>
<td>0.8890</td>
<td>0.0270</td>
<td>0.2000</td>
<td>0.6894</td>
<td>2.6607</td>
</tr>
</tbody>
</table>

Resource: Findings of the study

### Hypotheses Test

In this section, the research hypotheses are tested. Due to the nature of the data, the research hypotheses were tested at combined data level. Before fitting the regression model and test research hypotheses, classical assumptions were tested and according to the established pre – assumptions of the mode, hypothesis was tested. In the regression model, considering the amount of probability we decided to reject or not reject the null hypothesis. If probability of t – statistics for variable (AFit) is less than 0.05 fault level, null hypothesis is rejected otherwise the null hypothesis is not rejected.

### Table 2
**The results of data analysis to test the hypothesis**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Standard error</th>
<th>t-statistics</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width from origin</td>
<td>0.9450</td>
<td>0.1375</td>
<td>6.8689</td>
<td>0.0000</td>
</tr>
<tr>
<td>Audit fees</td>
<td>0.0170</td>
<td>0.0062</td>
<td>2.7430</td>
<td>0.0066</td>
</tr>
<tr>
<td>Firm size</td>
<td>-0.0316</td>
<td>0.0109</td>
<td>-2.8859</td>
<td>0.0043</td>
</tr>
<tr>
<td>Ratio of market value to book value</td>
<td>-0.0178</td>
<td>0.0063</td>
<td>-2.8260</td>
<td>0.0052</td>
</tr>
<tr>
<td>Assets visibility</td>
<td>-0.0160</td>
<td>0.0658</td>
<td>-0.02438</td>
<td>0.8076</td>
</tr>
<tr>
<td>First order auto – regression</td>
<td>0.2471</td>
<td>0.0668</td>
<td>3.6968</td>
<td>0.0003</td>
</tr>
<tr>
<td>Determination coefficient</td>
<td>0.8772</td>
<td></td>
<td>F-statistics</td>
<td>119.1884</td>
</tr>
<tr>
<td>Modified determination coefficient</td>
<td>F-statistics</td>
<td></td>
<td></td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Resource: Findings of the study

According to the value for F-statistics that is less than 0.05, H0 is rejected and it shows that all regression coefficients are not zero at the same time; thus this model is significant at 95% confidence level. Determination coefficient value is 0.8772 that shows 72/87% change in dependent variable (capital structure) is explained by independent and control variables. Based on Table 2, t-statistics probability is 0.0066 for audit fees variable (AFit). This value is less than 0.05 error level; so H0 rejected. Thus there is
a significant relationship between audit fees and capital structure. So the hypothesis of the study is not rejected. It should be noted that the among control variables, firm size (SIZE), the ratio of market value to book value (MB) have a significant impact on the capital structure; because the $t$-statistic probability values of variables including firm size, ratio of market value to book value are less than 0.05 error level.

The disclosure of audit fees, is providing information role to investors and creditors to assess the independence of the auditor so auditor’s independence is not impaired in fact or in appearance. If there is a relationship between providing information of financial statements and financing and cost of financing, the impact of audit fees on the cost of financing may be direct or indirect. Selection of the appropriate capital structure is important to maximize corporate value. Increasing debt share more than desired level leads to increasing financial risk to investment cost and this also increases agency costs and auditing workload that finally has a significant relationship to audit fees. In this study, the relationship between audit fees and capital structure decisions in listed companies on Tehran Stock Exchange was examined. This hypothesis was tested using generalized least squares (GLS) regression technique. The results showed coefficient of determination for the survey, is in the range of 88% which its explanatory power and reliability is high. Results showed that significance level of independent variable (audit fees) is less than 0.05, which means that there is a significant relationship between audit fees and capital structure decisions. Given that the estimated coefficient of audit fees is positive, the findings indicate a significant and positive relationship between audit fees and capital structure decisions. The results show that companies that pay higher audit fees have higher financial leverage and use more debt. Prediction is a key factor in economic decision-making. Investors, creditors, management and other people in economic decisions rely on forecasts and expectations. Of the most important issues related to the theoretical foundations associated with corporate governance, is agency theory. Audit is an important component of strong corporate governance, which can be considered as a controlling tool that enhances the transparency of information. Thus due to the importance of independent audit in quality of financial reporting, and it association with creditors decisions, audit is an inevitable part of their predictions of situation and financial power of credit taker companies. In general, one of the regulatory mechanisms that has a confirmatory role in information related to financial statements, is financial statements audit. In fact, business units guarantee them by auditing financial statements. Due to this the auditors must audit the financial statements completely independent and impartial and consider professional behavior at all times. Conflicts of interest between managers of business units and other stakeholders resulted from the fact that managers effectively control assets, while they have no major share, as a result it is expected an opportunistic behavior occur in financial reporting including quality and reliability, so strong governance mechanisms needed to reduce this behavior willingness of managers. Due to recent corporate accounting scandals, the quality and credibility of annual reports is questionable in companies around the world. These recent financial scandals of companies is a major challenge to the authenticity, desirability and value financial reports by firms. In general, if a financial report is not complete and reliable, its desirability for decision-making and future predictions is reduced. Jensen and Meckling (1976) argue that self – interested managers often are always looking for ways to reduce the possibility of transferring wealth from creditors to their shareholders. Elimination of conflicts of interest between managers, owners and holders of debt (agency conflict), has increased the demand for quality auditing. They also believe that an independent auditor would increase the credibility of financial statements. In general, larger audit firms are more motivated to run high-quality audit in a high quality audit pricing. Beaty (1989) shows that when the audit fees is higher than expected suggests providing high
quality audit by the auditor’s more effort. In general, higher fees is for higher audit quality (Bhatia et. al., 2015, p. 2). Accordingly, we can state that there is a significant and positive relationship between audit fees and capital structure decisions. Audit fees affects the capital structure. Selection of an appropriate financial structure has a significant impact on the maximization of corporate value. Increasing debt share more than desired level leads to increasing financial risk to investment cost and this also, increases agency costs and auditing workload that finally has a significant relationship to audit fees. Findings of some studies such as Mirzaeian (2011), Hossein Nejad Chenarbon (2012) show that audit fee has no impact on capital structure decisions which is not consistent with the results of the present study. Some other studies such as Minnis (2011), Bhatia et. al., (2015) show that audit fee affects capital structure decisions which is consistent with the results of the present study.

6. RECOMMENDATIONS

Since the audit fees increase the reliability of financial statements and financial statements audit is a reliable resource for investors, and due to the fact that audit fees and auditor’s reputation are at the same direction, in order to increase reliability of financial statements, we recommend investors to select audit firms that audit by professional and famous auditors with high fees.

Since the audit fees increase the reliability of financial statements. And based on the results from this study, we can say that audit pricing is towards increasing the quality of company’s financial statements that increase validity of manager’s reports by higher quality auditors thus we recommend managers to select the best auditor.

The results showed that increased audit fees, increases financial debt (leverage); therefore, it is recommended that creditors and other users that audit fees is reliable basis to enhance the quality of financial information which should be considered to make decisions about credit and financial services.

References


