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Investigating the relationship between managerial ownership, financial leverage and audit quality and performance of companies listed in Tehran Stock Exchange

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ABSTRACT

This study was conducted to examine some of the factors affecting the value and performance of companies listed in Tehran Stock Exchange. The research is applied in terms of objective and descriptive-correlational in terms of nature and method of study. For this purpose, the variables of Tobin's Q, managerial ownership, financial leverage and audit quality of companies listed in Tehran Stock Exchange were used and relevant information was analyzed during 2009-2013. Randomly selected sample included 128 companies per year that according to five-year study, total number of them was 640 companies. The results showed that there is a significant positive relationship between managerial ownership and financial leverage and Tobin's Q of companies listed in Tehran Stock Exchange, but there is no significant relationship between them and audit quality of companies listed in Tehran Stock Exchange.

Key words: *Performance, Tobin's Q, managerial ownership, financial leverage, audit quality*

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INTRODUCTION

One of the most important motivations of people for investment is to gain profit and wealth. Creating value and increasing the wealth of shareholders in long-term is one of the important goals of economic firms, and increasing the wealth will be possible only by optimal performance. Performance measurement of the company is a basic need. There are different criteria for measuring the performance. Tobin's Q is one of the criteria in which market and book value of the company are considered. Financial scandals in the past decade motivated financial markets and investors to pay attention to corporate governance criteria and mechanisms (Abdussalam MA, 2006). Companies need capital to grow and thrive. One part of capital within the company is supplied through accumulated profit that has been created as result of company profitability and has not been divided among stockholders, and rest of it can be created through financial markets of the capital or borrowing (Jensen M, 1986). Audit quality as one of the mechanisms of corporate governance is a key element of performance monitoring of company. In order to measure the quality of audit, the criteria such as size of audit institute, industry expertise, and tenure of are used. Representation theory states that companies with better corporate governance structure have better performance and higher value due to the lower costs of representation. The researchers have shown that companies with better corporate governance mechanisms have better performance and higher market value (Bayrakdaroglu A, Ersoy E, Citak L, 2012). Maximizing the company's value requires implementation of profitable projects. In today's world, due to competitive market conditions, determining the appropriate financing method is necessary to increase the profitability and viability of companies (Nikbakht M, peykani M, 2009). One of the important issues that has been considered in recent years by researchers due to extensive financial scandals at the corporate level and had been proposed an important issue for investors is the corporate governance. Corporate governance deals with monitoring of the management and separation of economic units from its ownership and ultimately protecting the rights of investors and stakeholders (Hassas-Yeganeh Y, Yazdanian N, 2002). Corporate governance has been the subject of many discussions in the trade world and financial markets during the past ten years (Zamani M, 2010). Research on the quality of the audit cannot be analyzed without considering supply of audit quality by official accounting institutes (Hassas-Yeganeh Y, Ghanbari F, 2007). Research has shown that the structure of the audit institute has impact on audit quality. Based on this research, the quality of the audit in institutes that have stronger structure in using audit methods is different from other institutes (Alavi-tabari H, et al, 2009). From the perspective of the auditors, the audit size is one of the features that have impact on audit quality (Mojtahed-Zadeh, Aghayi P, 2005). Considering the research literature, Solang et al (Sulong Z, Gardner JC, Hussin AH, Sanusi ZM, McGowan CB, 2013) examined the relationship between managerial ownership, financial leverage, and audit quality and the performance of Malaysian companies. Results of their study showed that performance of companies during the study period (2006-2009) declined significantly and the audit quality in this period had negative relationship with performance. In other words,

audit quality had negative impact on performance of companies. In addition, Bay et al examined the relationship between corporate governance and market value of companies listed in China Stock Exchange. The results of their study showed that state ownership has significant negative relationship with the company's market value. Sytak et al (Citak L, Ersoy E, Bayrakdaroglu A, 2012) conducted as a study entitled "Is there a relationship between corporate governance and value-based financial performance criteria?" Their sample was companies listed in Turkey Stock Exchange from 1998 to 2007. In total, 41 companies were selected and the model was tested. Results of study showed that duality in CEO task had significant impact on market value added and economic value added. Ownership concentration had no impact on market value added. Managerial ownership had no impact on financial criteria and finally foreign investors lead to increased economic value and reduced market value added. In addition, several studies have been conducted to examine the relationship between ownership structure and corporate governance, ownership structure impact on company performance, and other dimensions associated with this research (Xu X, Wang. Y, 2009; Ali EA, Souad S, 2001). According to what was said above, in order to help investors get better returns as well as guiding the country towards the capital companies toward optimal performance and for economic progress in line with the country's development programs, determining the variables influencing the performance of the company seems to be an essential. To realize this goal, conducting studies to identify the factors affecting the performance of the company is needed. In this regard, this study was conducted to examine some of the factors influencing the performance of the company and to explain its impact on the company's performance. Accordingly, research questions were stated as follows. Is there a significant relationship between company performance and managerial ownership in the companies listed in Tehran Stock Exchange? Is there a significant relationship between company performance and financial leverage in the companies listed in Tehran Stock Exchange? Is there a significant relationship between company performance and audit quality in the companies listed in Tehran Stock Exchange?

METHOD

This study is applied in terms of objective and descriptive-correlational in terms of nature and method of study. Considering the multicity of economic units and their dispersion throughout of country and lack of necessary information such as audit financial statements, the population of study included all companies listed in the Tehran Stock Exchange. The reason to select the companies listed in Tehran Stock Exchange is that the accessibility to financial information of these companies is high. In addition, due to standards of Tehran Stock Exchange organization, financial statements information of these is more homogeneous. According to the information available, the number of manufacturing companies in the beginning of 2009 is 346 companies. The study population consisted of 189 companies listed in the Tehran Stock Exchange. Using Cochran formulas, sample of study was determined to be 62 companies, but 95 companies were studied for higher confidence. In addition, samples were selected randomly in this study. To collect quantitative data, CDs of Tehran Stock Exchange, Tehran Stock Exchange official website and other related websites, accounting information of stock exchange companies and other sources were used. Eviews software was used for analyzing and estimating. The collected data were classified using Excel software based on the variables examined. The final analysis was performed using SPSS18 and Eviews7 software. The conceptual model of research: conceptual framework of research was outlined based on theoretical principles and literature of the study as shown in Chart (1), in which the ownership management, audit quality, and financial leverage are independent variables and performance of the company is the dependent variable.

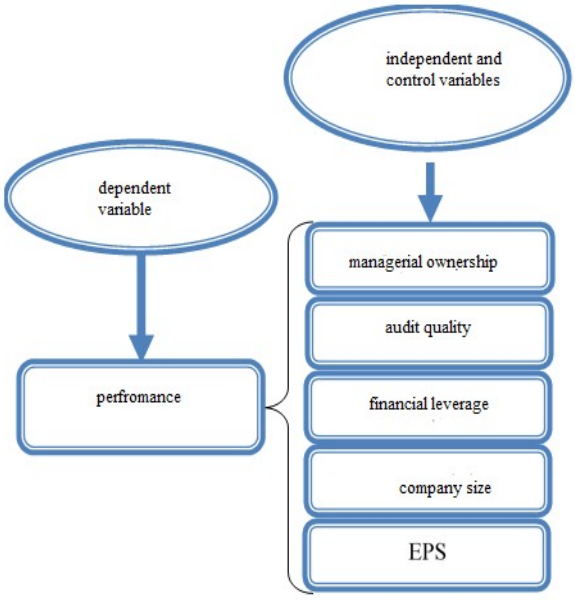

Chart 1: conceptual framework of the research model

In Table 1, the variables of this study and the way to calculate them have been represented

Table 1: Summary of research variables

Variable	Type of variable	Calculation
Tobin's Q	dependent	Stock market value plus book value of liability divided by total assets
Managerial ownership	Independent	Ratio of managers' ownership to total stocks of company
Audit quality	Independent	Instituted size: If the auditor is auditing organization, it is 1, otherwise, it is zero
Financial leverage	Independent	Total liabilities to total assets
Company size	Control	The natural logarithm of total assets
Profitability	Control	Net profit divided by the number of stocks of the Company

Data analysis

Descriptive statistics

In Table 2, the central indices such as mean and median and dispersion indices such as SD and skewness and kurtosis coefficients have been calculated for various variables.

Table 2- descriptive statistics

	Tobin's Q	Managerial ownership	Leverage	Audit quality	Size	Profitability
Mean	1.4985	0.6402	0.6897	0.2234	5.8515	1665.308
Median	1.2800	0.7200	0.6600	0.0000	5.8100	501.4900
Maximum	6.9400	1.0000	3.7600	1.0000	7.7800	220069.3
Minimum	0.1300	0.0000	0.0600	0.0000	4.3900	4002.620
SD	0.7530	0.2720	0.3528	0.4168	0.5337	11376.11
Skewness	2.2694	-1.0491	3.1619	1.3278	0.4532	14.90062
kurtosis	10.7752	3.1650	21.5505	2.7632	3.3361	251.2817
Jarque-Bera	2161.497	118.1357	10243.04	189.5748	24.9274	1667517
Probability	0.0000	0.0000	0.0000	0.0000	0.000004	0.00000
Sum	959.0400	409.7500	441.4500	143.0000	3744.960	1065797
The sum of squares of deviations	362.3808	47.2962	79.5588	111.0484	182.0574	10+8.27 E
Observation	640	640	640	640	640	640

According to the results obtained, the high value of mean compared to median indicates larger points in the data, since mean is influenced by these values. In these cases, the data distribution is skewed to the right. In cases where the median value is greater than the mean value, the variable distribution is skewed to the left. In the distribution of some variables, the values of mean and the median are close to each other that in such cases, the distribution of variables is symmetrical. Symmetry and kurtosis value are characteristics of the normal distribution that they were discussed in the normality of the dependent variables and residuals section. As symmetry is one of the characteristics of normal distribution and normality of the dependent variable is one of the main assumptions of the regression analysis, the dependent variable symmetry is very important in research.

Inferential statistics

Using Kolmogorov-Smirnov test, normal distribution of the variable of ratio of return on equity was investigated.

Table 3: Kolmogorov-Smirnov test results

		Tobin's Q	Managerial ownership	Leverage	Audit quality	Size	Profitability
n		640	640	640	640	640	640
Normal parameters	Mean	1.4985	0.6402	0.6895	0.2234	5.8515	1665.3076
	SD	0.75306	0.27206	0.35285	0.41687	.053377	11376.114
The highest errors	Absolute	0.170	0.131	0.166	0.481	0.063	0.396
	Positive	0.170	0.096	0.166	0.481	0.063	0.396
	negative	-0.130	-0.131	-0.082	-0.296	-0.028	-0.366
Kolmogorov-Smirnov-Z		4.289	3.306	4.195	12.158	1.586	10.021
Asymp. Sig. (2-tailed)		0.00	0.00	0.00	0.00	0.00	0.00

The null hypothesis and the opposite hypotheses in this test are written as follows:

$$\begin{cases} H_0: \text{Data follow normal distribution for dependent variable} \\ H_1: \end{cases}$$

If the values of significance level is lower than 0.05, null hypothesis will be rejected at 95% confidence level. As seen in the table below, significance level for the dependent variable and the residuals is greater than 0.05. Therefore, the null hypothesis is not rejected, meaning that data follow a normal distribution for the dependent variables. To study and estimate the overall model, panel analysis was used. The reason for using this method is due to nature of the data, since in the panel analysis, data are collected in cross section method (data are integrated). In the data collected in this way, the independence of observations is not kept, since any company is observed several times in different years that these observations depend on each other. In other words, in this analysis, the number of companies is multiplied by the number of years. There are various methods for estimating a model using panel data model, which we use F test to determine which method to be used.

Table 4 shows the F test results for the selected companies (2009-2013) show

Table 4: F Test results

Prob.	F	SSR_{fixed}	SSR_{pool}	
0.001	153106.4	5.0279	6.6158	Value

Table 4 illustrates well that the hypothesis of the equality of the intercepts is rejected. After determining that the intercepts are not equal for different companies, we should test this hypothesis to realize that fixed effect model or random effects method should be used to estimate the model. To test the model using fixed effects or random effects estimation method, the Hausman test (Hausman Test) is used. Hausman statistic has a chi-square distribution with degrees of freedom equal to the number of estimated coefficients in the model. If the statistic is calculated at a certain level, the chi-square distribution table is larger then the null hypothesis is rejected. 234853/12 calculated statistics show that the chi-square distribution with 5 larger. The test results clearly show that the method is not suitable random effects and better use of fixed effects . To test that model to be tested using fixed effects or random effects method, the Hausman test is used. Hausman statistic has a chi-square distribution with degrees of freedom equal to the number of estimated coefficients in the model. If the statistic calculated at a certain level is larger than the chi-square distribution of table, the null hypothesis is rejected. Calculated statistic shows 12.234853 that it is larger than chi-square distribution with value of 5. The test results clearly show that the random effects method is not suitable, and it is better to use fixed effects method. For the analysis of data, SPSS and EVIEWS software was used. The analysis of regression variance is to investigate the linear relationship between the variables. The probability level o (or significance level-sig) F is equal to 000.0. This amount is less than 0.05, so the null hypothesis is rejected at 95 per cent confidence level, and linearity hypothesis of the model is confirmed. In addition, the significance of total regression was tested through EVIEWS and by using fixed effects method. The results of coefficients, significance level related to it, coefficient of determination and standardized coefficient, statistic F and significance level related to it and the result of Durbin-Watson test were obtained. To make judgment on hypothesis and the presence of significant model, F statistic or significance level of it should be considered. The test results show that the value of the F statistic is equal to 5.677461, which is located in the area of rejection of the null hypothesis. In addition, based on significance level, this conclusion can be made. As the significance level of this statistic is less than 5%, null hypothesis is rejected and the opposite hypothesis stating a significant relationship is confirmed. Adjusted coefficient of determination is equal to 0.49 and the coefficient of determination is 0.59, meaning that 59% of changes in the dependent variable are explained by the independent variables. The Durbin-Watson statistic value is between 1.5 and 2.5 that is acceptable. Values close to 2 indicate non-autocorrelation of residuals that is another regression assumption. To judge on significance of the coefficients of each independent variable, their t-statistic values or the significance values should be considered . Values of t for intercept coefficients, managerial ownership, financial leverage, and company size was equal to 2.575127, 1.998944, 4.602337 and is -2.237105, respectively. T-statistic values for the coefficients of independent variables with the value of t and the statistic t chart are not placed in the area of rejection of null hypothesis. In other words, the independent variables in the model are not significant. The t value for intercept is 2.575127 that this index is paced in the area of rejection of the null hypothesis and it is significant in the regression model. In short, t-statistic values for constant coefficient, managerial ownership, financial leverage and company size is placed in the area of null hypothesis rejection, meaning that this variable is significant in the model and other variables are not significant in the model, since t values for these variables are placed in the area of non-rejection of the null hypothesis.

DISCUSSION AND CONCLUSION

According to the results obtained in this study, the first research hypothesis is confirmed. In other words, the results show that there is a significant positive correlation between managerial ownership and Tobin's Q of companies listed in the Tehran Stock Exchange. It is in line with results of previous studies conducted in this area (Bayrakdaroglu A, Ersoy E, Citak L, 2012; Sulong Z, Gardner JC, Hussin AH, Sanusi ZM, McGowan CB, 2013; Kapopoulos P, Lazaretou. S, 2007; Mueller E, Spitz. A, 2006; Rahimian N, Tavakkol-Nia E, Tirgari M, 2013). It should be noted that this result is consistent with theoretical principles. This result suggests that the increase in the number of stocks held by board members of the companies has impact on the value of companies. In addition, there is a significant positive relationship between financial leverage, and Tobin's Q of companies listed in the Tehran Stock Exchange. This result suggests that as financial leverage of companies increases, market value of Tobin's Q increase. According to this result, the second hypothesis was confirmed. However, the test results showed no significant relationship between audit quality and Tobin's Q of companies. This result suggests that as audit institute is larger, has no impact on the Tobin's Q of companies, so the third hypothesis is rejected. In this study, significant correlation was not found between quality of audit and Tobin's Q among the companies listed in Tehran stock exchange. This result implies that the auditing organization in Iran, as the largest auditing institute, has no impact on Tobin's Q of companies listed in Tehran Stock Exchange and the performance of banks. This result is not in line with the theoretical principles of corporate governance. It means that merely large size of auditing organization and superficial independence do not affect the performance of the companies. However, it is worth to note that some of the researchers (Sulong Z, Gardner JC, Hussin AH, Sanusi ZM, McGowan CB, 2013) found significant negative relationship between quality of the audit and performance companies.

According to the results of this study, it is recommended that managerial ownership to be increased to improve the company's performance and to increase the Tobin's Q, since it leads to strong correlation between benefits of the board members and company performance and Tobin's Q. As a result, board members will make much effort to improve the performance of the company. Additionally, in order to more and better use of financing sources, and to improve the situation of the company in the capital market, it is recommended that practical actions to be taken. Therefore, it would be appropriate to increase the financial leverage of the company by improving the company's capital structure. There are limitations in any study that this research is no exception in this regard. Controlling the effect of some external variables such as fluctuation of major economic indicators (inflation), the political situation, the status of the capital market and some internal variables such as the life of the bank, other corporate governance variables, etc. is impossible sometimes and their effect on the research results cannot be denied. Therefore, it is necessary to consider the effect of such variables when using the results of the study. In addition, using different accounting methods of banks to measure and to disclose the financial events can affect the results. In this regard, it is necessary to consider such difference when using the results of the study.

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