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EFFECT OF MANAGERIAL OWNERSHIP, FINANCIAL LEVERAGE AND AUDIT QUALITY ON PERFORMANCE

Somayeh MASOUDI

Department of Accounting, Babolsar Branch, Institute of Higher Education Allameh Amini, Babolsar, Iran.

Email: Masoudi.S2018@gmail.com

ABSTRACT

The impact of managerial ownership, financial leverage, and audit quality is investigated on the performance of companies listed in Tehran Stock Exchange through this study, in which the effect of managerial ownership, financial leverage, and audit quality variables has been studied separately. A hypothesis was developed for each of the variables and its impact was tested on the performance of the company. The statistical sample consisted of 180 companies in the time period of 2011-2015, which is analyzed by Eviews software. The regression results showed a significant relationship between financial leverage, audit quality and performance of the company, but there is no significant relationship between managerial ownership and corporate performance.

Keywords: *Financial Leverage, Audit Quality, Managerial Ownership, Corporate Performance.*

INTRODUCTION

Performance is to compare actual results and predefined goals, used to measure the efficiency and effectiveness of how the organization uses resources and meet customer needs to achieve the organization's standards (Lee et al., 2010). Performance can also be considered as a broad combination of intangible results like financial and economic outcomes (Ebrahimi et al., 2016; Mirbargkar and Ebrahimi, 2017). Generally, there is still no perfect agreement between the experts about variables and performance indicators, but performance indicators are often categorized in two subjective and objective groups. The objective indicators of performance are those that are considered to be quite realistic and measured based on objective data, and the subjective indicators of performance are further indicators which are formed in the basis of the judgment of the stakeholder groups of organization (Kheiri and Roshani, 2013). In general, corporate governance includes legal, cultural, and institutional components that determine the direction and performance of companies. The structure of managerial ownership and legal frameworks are one of the main and determinant factors of corporate governance systems (Soleymani, 2013). Managerial ownership is one of the mechanisms of corporate governance that reduces the conflict of interests between managers and stakeholders and, consequently, creates value for the company. Jensen and Meckling (1976) showed that if corporate managers are stakeholders, they will have less inclination to deviate from the goal of maximizing stakeholders. According to several researches, it is known that managerial ownership affects corporate performance because the amount of stock held by corporate managers can be an incentive to make various financial decisions based on their personal resources or the interests of stakeholders, and if any decision is made, it will increase the value (Murek et al., 1988; Short

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and Keasey, 1999; Miguel et al., 2004). Florakis et al. (2009) investigated the relationship between managerial ownership and a large sample of British firms over the period 2000-2004 using the semi-parametric estimation approach. The empirical results of the research indicated that there is an impact of the initial alignment between managerial ownership and corporate performance when the levels of managerial ownership are less than 15%, but there is no strong correlation between these two factors at medium or high levels of managerial ownership. Leverage in finance is a term that refers to any kind of technique used to reproduce profits or losses. Typical methods for achieving leverage are borrowing money, purchasing fixed assets, and using derivative tools.

Capital coverage firms often create leverage for their assets using derivative tools; for example, such a firm can spend $ 1 million of capital margin to deal on crude oil with a $ 20 million value, thereby earning many profits. Audit quality is one of the key issues in the field of auditing and capital markets. In order to understand the different concepts and dimensions of audit quality, various studies have been conducted by researchers to discover the relationship between audit quality and other variables. However, since the audit quality is difficult to be observed in practice, research in this field has always faced many problems. This article aimed to review the literature related to the audit quality, with referring some researches in this area. One of the most commonly used definitions of audit quality is the definition given by De Angelo (1981). He defined the audit quality as follows: "Market assessment (inference)" from that the auditor (1) discovers important distortion cases in the financial statements or the accounting system of the owner, and (2) reports the detected important distortion.

The probability that the auditor will discover important distortions depends on the auditor's competence and the probability that the auditor reports the detected important distortions depends on the auditor's independence. The definition of "De Angelo" for the actual quality of auditing is based on users' perception or so-called market inference from audit quality. The application of this definition in expressing the actual audit quality is based on the fundamental assumption that the perception of audit quality reflects the actual audit quality.

The main question is as follows: Do managerial ownership, financial leverage, and audit quality affect firm performance?

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

The conceptual model of the research according to the model of Sulong et al. (2017) is presented in Figure 1 and is provided in accordance with the model of hypotheses and the method of measuring the variables.

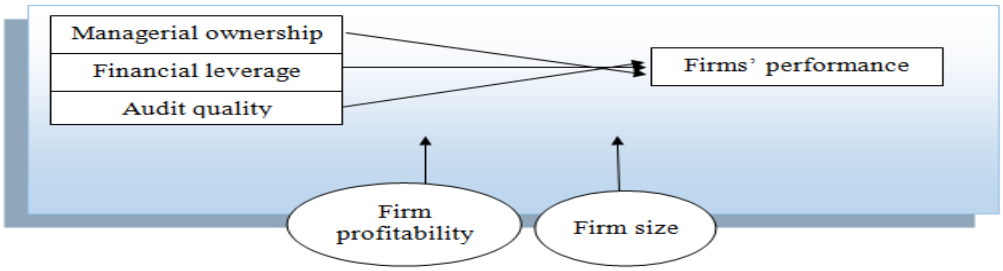

Figure 1. Conceptual model of research (Sulong et al., 2016)

The following models are used to test the research hypotheses:

$$ROA_{i,t} = \beta_0 + \beta_1 MANOWN_{i,t} + \beta_2 EPS_{i,t} + \beta_3 SIZE_{i,t} + \varepsilon \quad (1)$$

$$ROA_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 EPS_{i,t} + \beta_3 SIZE_{i,t} + \varepsilon \quad (2)$$

$$ROA_{i,t} = \beta_0 + \beta_1 A\,uditQ_{i,t} + \beta_2 EPS_{i,t} + \beta_3 SIZE_{i,t} + \varepsilon \quad (3)$$

Where in the model:
ROA: Corporate Performance
MANOWN: Managerial ownership
LEV: Financial leverage
Auditq: Audit quality
EPS: Earnings per share
Size: Firm size

Dependent variable:

$ROA_{i,t}$ (Return on Assets): The return on assets of the company is equal to the ratio of net earnings to the total assets of the company i in year t (Sulang et al., 2016).

Independent variables:

$MANOWN_{i,t}$ (Managers' Ownership): The percentage of ownership of managers (Sulang et al., 2016).

$LEV_{i,t}$ (Leverage): Firm leverage is equal to the total debt divided by the total assets of the company i in year t (Sulang et al., 2016).

$AuditQ_{i,t}$ (Audit Quality): The virtual variable of the company's audit quality, if the company's financial statements are audited by the audit organization, one is the number and otherwise it is zero (Sulang et al., 2016).

Control variables:

$EPS_{i,t}$ (Earning Per Share): The earnings per share of company i in year t.

$SIZE_{i,t}$: The size of the company that is equals to the logarithm of the total assets of the company i in year t.

ε: The error coefficient, which is independent for each period, has a normal distribution and is independent from regression factors.

RESEARCH METHODOLOGY

This research is a correlation research, in which the relationship between variables is analyzed based on the objective of the research. This study aimed to investigate whether there is a significant relationship between the independent variables and the dependent variables of the research. To that end, relevant statistical methods have been used. The statistical population of the study consists of the companies listed in the Tehran Stock Exchange which are listed on the Stock Exchange companies during the period from 2011 to 2015. The criterion for selecting a sample in this research is the systematic elimination method, taking into account the following conditions:

1. During the mentioned financial years, they have not changed their activities or their financial year.
2. Companies have to be listed before the year 2011.
3. The company must have been active on the stock exchange in the years 2011 to 2015 and should not have any pause.
4. The company must be a manufacturing company and it does not include banks and financial institutions (investment companies, financial intermediation, holding companies, banks and leasing companies).
5. Companies should not have changed their financial period during these five years, and the company's financial year will end in March each year.
6. Corporate financial information should be fully available.

Considering the limitations imposed on 435 companies listed to the Tehran Stock Exchange, 180 companies were selected as the final sample. Information about theoretical foundations of the research has been collected through the library method and the study of existing books and internal and external articles in this area.

RESULTS

Model 1 presented in this study is the first model of the company's performance, which is based on the hypothesis that managerial ownership has a significant effect on the performance of companies. The hypothesis 1 of this research is as follows;

- *Hypothesis 1*: Managerial ownership has a significant effect on the performance of companies.
  First, we use Chow and Hausman Diagnostic Test to determine the appropriate estimation method for this model.

Table 1: The results of the constant effect test (Chow test)

Effects Test	Statistics	Probability
Cross-section F	6.385517	0.0000
Cross-section Chi-square	857.933985	0.0000

Source: Researcher's findings

First, we will test the Chow test to determine the type of data that we entered into the Eviews software, if the probability value of a chow test is:

- less than 0.05 (<0.05), our type of data is Panel data;
- more than 0.05 (>0.05), our data type is Pool data.

As can be seen, the probability value of Chow test is 0.0000, which is less than 0.05 (<0.05). As a result, our data type is Panel data.

Table 2: Randomized effect test results (Hausman test)

Test Summary	Statistics	Probability
Cross-section random	14.0278641	0.0029

Source: Researcher's findings

In the next step, we use the Hausman test to determine the type of estimation method. If the probability value of Hausman test is:

- Less than 0.05 (<0.05), we use the Fixed Effect method for estimation.
- More than 0.05 (>0.05), we use the Random Effect method to estimate.

As can be observed, the probability value of the Hausman test is 0.0029, which is less than 0.05 (<0.05). As a result, we use the Fixed Effect method to estimate.

Table 3: Results of the model 1 estimation of company performance

Managerial ownership	MANGOWN	-1.500000-05	-0.326738	0.7440
Earnings per share	EPS	7.910000-05	42.85514	0.0000
Size of company	SIZE	0.054022	7.293711	0.0000
Interception	C	0.372766	8.303213	0.0000
Determination coefficient	R^2	0.933511	-	-
Adjusted determination coefficient	$\overline{R^2}$	0.916633	-	-
Durbin-Watson statistic	D.W	1.970483	-	-
F-statistic	F. Statistic	55.31138	-	0.00000

Source: Researcher's findings

The earnings per share variable have a positive and significant relationship with the return on the assets of the company. If a unit of earnings per share of the company increases, it will result in an increase of 91.7 units in the return on assets of the company.

The company size variable has a positive and significant relationship with the return on assets of the company. If a unit of firm size increases, it will result in an increase of 0.054 units in the return on assets of the company.

However, there was no significant evidence of a significant effect of managerial ownership variable on the return on assets.

The determination coefficient (R^2) is 93%, and this coefficient shows that 93% of the changes in dependent variables are explained by the mentioned independent variables. The Durbin-Watson statistic value is 1.97, which shows no correlation between its variables. The probability of the F-statistic presented in Table 4-6 shows the significance of the whole model at a confidence level of 99%, indicating a total significance. In general, the results obtained from this model do not confirm the hypothesis 1.

The regression equation for model 1 can be written as follows:

$$ROA = 1.431\ (EPS) + 0.054\ (SIZE) + 0.372$$

The model 2 presented in this study is the model 2 of the company's performance, which is based on the hypothesis that financial leverage has a significant effect on the performance of companies. The hypothesis 2 of this research is as follows:

- ***Hypothesis 2:*** Financial leverage has a significant effect on the companies' performance. First, we use Chow and Hausman diagnostic tests to determine the appropriate estimation method for this model.

Table 4: Fixed effect test results (Chow test)

Effects Test	Statistic	Probability
Cross-section F	3.835144	0.0000
Cross-section Chi-square	604.477808	0.0000

Source: Researcher's findings

If the probability value of a chow test is:

- Less than 0.05 (<0.05), our type of data is Panel;
- More than 0.05 (>0.05), our data type is Pool.

As can be seen, the probability value of Chow test is 0.0000, which is less than 0.05 (<0.05). As a result, our data type is Panel.

Table 5: Random effect test results (Hausman test)

Test Summary	Statistic	Probability
Cross-section random	22.686356	0.0000

Source: Researcher's findings

If the probability value of Hausman test is:

- Less than 0.05 (<0.05), we use the Fixed Effect method for estimation.
- More than 0.05 (>0.05), we use the Random Effect method to estimate.

As can be seen, the probability value of the Hausman test is 0.0000, which is less than 0.05 (<0.05). As a result, we use the Fixed Effect method to estimate.

Table 6: Results of Model 2 for company performance evaluation

Independent variables	Abbreviations	Estimated coefficient	t-statistic	P-Value
Financial leverage	LEV	-0.215482	-13.36571	0.0000
Earnings per share	EPS	6.970000-05	30.42257	0.0000
Size of company	SIZE	0.058142	4.720435	0.0000
Interception	C	0.540125	7.580383	0.0000
Determination coefficient	R^2	0.937019	-	-
Adjusted determination coefficient	$\overline{R^2}$	0.921032	-	-
Durbin-Watson statistic	D.W	2.056877	-	-
F-statistic	F. Statistic	58.61162	-	0.0000

Source: Researcher Findings

The financial leverage variable has a negative and significant relationship with the return on assets of the company. If company's financial leverage increases one unit, it will result in 0.21-unit decrease in the return on assets of the company.

The earnings per share variable have a positive and significant correlation with the return on assets of the company. If a unit of earnings per share of the company increases, it will increase 6.97 units in the return on assets of the company.

The company size variable has a positive and significant relationship with the return on assets of the company. If one unit of firm size increases, it will result in an increase of 0.058 in the return on assets of the company.

The coefficient of determination (R^2) is 93%, and this shows that 93% of the changes of dependent variables are explained by the mentioned independent variables. The value of Durbin-Watson statistic is 2.05, which indicates that there is no correlation between the variables. The probability of the F-statistic presented in Table 4-9 indicates that the whole model is significant at a 99% confidence level, indicating an entire significance. In general, the results obtained from this model confirm the hypothesis 2.

The regression equation for model 2 can be written as follows:

$$ROA = -0.21\ (LEV) + 6.97\ (EPS) + 0.058\ (SIZE) + 0.54$$

Model 3 presented in this study is the third model of the company's performance, which assumes that audit quality has a significant effect on the performance of the companies. The hypothesis 3 of this research is as follows:

- ***Hypothesis 3:*** Audit quality has a significant effect on the performance of companies. First, we use Chow and Hausman's diagnostic tests to determine the appropriate estimation method for this model.

Table 7: Fixed effect test results (Chow test)

Effects Test	Statistic	Probability
Cross-section F	6.366635	0.0000
Cross-section Chi-square	856.297116	0.0000

Source: Researcher's findings

If the probability value of Chow test is:

- Less than 0.05 (<0.05), our type of data is Panel;
- More than 0.05 (>0.05), our data type is Pool.

As can be observed, probability value of Chow test is 0.0000, which is less than 0.05 (<0.05). As a result, our data type is a mixed (or Panel).

Table 8: Random effects test (Hausman test)

Test Summary	Statistic	Probability
Cross-section random	12.854413	0.0050

Source: Researcher's findings

If the probability value of Hausman test is:

- Less than 0.05 (<0.05), we use the Fixed Effect method for estimation;
- More than 0.05 (>0.05), we use the Random Effect method to estimate.

As can be seen, the probability level of Hausman test is 0.0050, which is less than 0.05 (<0.050). As a result, we use the Fixed Effect method to estimate.

Table 9: Results of the third model of company performance

Independent variables	Abbreviations	Estimated coefficient	t-statistic	P-Value
Audit quality	AUDITQ	0.012643	5.499281	0.0000
Earnings per share	EPS	7.900000-05	41.48281	0.0000
Size of company	SIZE	0.052039	5.994098	0.0000
Interception	C	0349784	6.705969	0.0000
Determination coefficient	R^2	0.932730	-	-
Adjusted determination coefficient	$\overline{R^2}$	0.915654	-	-
Durbin-Watson statistic	D.W	1.967699	-	-
F-statistic	F. Statistic	54.62345	-	0.0000

Source: Researcher Findings

The audit quality variable has a positive and significant relationship with the return on assets of the company. If company's audit quality increases one unit, it will result in an increase of 0.012 units in the return on assets of the company.

The earnings per share variable have a positive and significant relationship with the return on assets of the company. If the earnings per share of the company increase one unit, it will result in an increase of 7.9 units in the return on assets of the company.
The company size variable has a positive and significant relationship with the return on assets of the company. If the firm size increases one unit, it will result in an increase of 0.052 in the return on assets of the company.
The coefficient of determination (R^2) is 93%, and this shows that 93% of the changes of dependent variables are explained by the mentioned independent variables. The level of Durbin-Watson statistic is 1.96, which indicates that there is no correlation between the variables.
The probability level of the F-statistic presented in Table 4-12 indicates the significance of the whole model at a confidence level of 99%, indicating a total significance. In general, the results obtained from this model confirm the hypothesis 3.
The regression equation for the third model can be written as follows:

$$ROA = 0.012\ (AuditQ) + 7.9\ (EPS) + 0.052\ (SIZE) + 0.34$$

CONCLUSION

In this research, the impact of three main factors including managerial ownership, financial leverage, and audit quality was investigated on the company performance. According to the study, financial leverage and audit quality have a significant relationship on the firm's performance, and managerial ownership has no significant relationship on company performance. According to the results of this study, by prioritizing financial leverage as a factor affecting the company performance, it can be stated that managers can fund the company externally because internal financing reduces the company's capital. Thus, company's performance can be improved with external financing. In this regard, the audit quality is placed in the second priority according to the results. Therefore, managers can use audit quality factor as an effective factor for improving company performance because audit quality has a significant relationship with company performance.
On the other hand, the financial leverage and audit quality of the company are important. Each of them, individually, impacts and enhances the company's returns. That the financial leverage in the financing sector and the proper selection of decision makers and stakeholders can be somehow effective. In the other part, the audit quality is measured by the auditor from company's work in a financial period. Both factors can have a significant impact on the company's performance improvement. Increasing the financial leverage and the quality of the audit work will increase the returns on assets and company performance.
It is suggested to future researchers that one aspect of the audit quality, which includes data, inputs and environmental factors, should be investigated separately on the company's performance. It is also suggested to test the audit quality variable in terms of auditors' wages. The constraints on mathematical models, as well as statistical analysis and outcome generalization are the research constraints which are the inherent limitations of this research.

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