Corporate Governance and Performance with regard to the Moderating Effect of the Firm Size in Tehran Stock Exchange

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ABSTRACT

Corporate governance defines as rules, structures, processes and systems that lead to achieve accountability objectives and respect for the beneficiaries’ rights by the entity. Efficient corporate governance mechanisms can improve the performance in capital markets. As there is a conflict between corporate governance and corporate performance in previous researches, the question rises whether the firm size reinforces the relationship between corporate governance and firm performance or not? This study aims to examine corporate governance and performance with regard to the moderating effect of the firm size in Tehran stock exchange over the period 2010 to 2014 by applying Multivariate regression analysis. The results indicate a complete moderating in this investigation. Investors and managers can make better quality decisions by considering the firm size and the impact they can have on corporate performance.

INTRODUCTION

In the recent years, corporate governance has got an essential and dynamic aspect of the business and it has recently attracted increasing attention progressively. The collapse of large companies such as Enron, WorldCom, Seiko, and etc. caused the loss of many investors and stakeholders, and this was the result of poor corporate governance systems. This happen emphasizes the necessity of progressing and improvement of the corporate governance at international level. International organizations such as the Organization of Economic Cooperation and Development (OECD) have provided internationally accepted standards in this case. This topic has got more important due to the recent events [1].

Efficient corporate governance mechanisms can improve the performance in capital market. The concept of corporate governance has been considered by the researchers and managers due to its impact on important organizational decision making methods and management methods. As there is a conflict between corporate governance and corporate performance in previous researches, the question rises whether corporate governance work as a stimulus for the firm performance or not?

A more fundamental question rises is whether the firm size reinforces the relationship between corporate governance and firm performance or not? If the firm size is small or large, does it have any influence on the relationship between corporate governance and firm performance? According to cost and benefit fact, the small firms use corporate governance less. Because the Corporate governance is costly and affecting the corporate performance less. Thus, in the majority of conducted studies in Iran there is no relationship between the firm size and the corporate governance. Considering the conflict between corporate governance and performance in previous researches and Since there is few researches about corporate governance impact on performance with regard to the impact of the firm size and to overcome limitations of previous researches on this title, this study aims to examine corporate governance and performance with regard to the moderating effect of the firm size in Tehran stock exchange.

The results of previous researches, considered the simple relationship between corporate governance and performance. When users study those results, they think there is no relationship between corporate governance and performance and they make decisions based on their understanding, while this is not a simple relationship. If the variable of firm size considers as a moderator in this relationship, it is likely to increase the quality of
Background:

Empirical research suggests that effective board and firm performance are positively and closely related [2]. And also Yermack found a significant and negative relationship between board size and company’s value. [3] found that there is a negative relationship between board size and performance.

Bennedsen [4] have concluded that board with members less than 6 has not important influence on the company performance, but when the number of members increased to 7 persons or more, the relationship of these two groups would get negative.

Hassas Yeganeh [5] and also Yermack have found a negative and significant relationship between the board size and the firm value. Guest [6] has examined the effect of board size on the performance of the large firms in UK that are listed over 1981 to 2002. The results show that the board size has a strong negative impact on performance.

O’Connell and Cramer [7] and Yermack [8] have studied 452 large US companies over 1987 to 1991. They have found a negative relationship between board size and firm value. In theory, a conflicts of interest arise when the CEO is placed in the position of Board Chairman.

Separation of the Board and CEO will leads to a better firm performance, but the results of researches in this area is very different [9]. In such a situation the supervisory board performance will reduce.

Agrawal [10] States the combination of role of board Chairman and the CEO represents control and supervision are not separated from management. [11][12] found that there is no significant relationship between firm performance and the separation of board composition and CEO.

Rachdi [13] indicate that there is a negative relationship between the firm performance and the board composition and CEO. Balatbat [14] found that separation of chairman and CEO are associated with higher operational performance.

Apart from general research on the impact of corporate governance on corporate performance and some conflicting results, there are a lot of researches in accounting literature and finance about the impact of corporate governance. Also with regard to representation theory and according to cost and benefit fact, this paper examines corporate governance and performance with regard to the moderating effect of the firm size.

Research hypotheses:

First hypotheses: there is a significant relationship between corporate governance and performance
1-1. There is a significant relationship between the number of board members and TOBIN’S Q.
1-2. There is a significant relationship between chair duality and TOBIN’S Q

Second hypothesis: Firm size reinforces the relationship between corporate governance and performance.
2-1. Firm size strengthen the relationship between the number of the Board of Directors members and TOBIN’S Q.
2-2. Firm size strengthen the relationship between chair duality and TOBIN’S Q

Research Methodology:

In the present study the population is 50 companies of all listed companies in Tehran Stock Exchange over the period 1388 to 1392. Data gathered by using the software database Rahavard-e-Novin 3 and also through direct outcomes of the financial statements and the report of the CEO. To test the hypotheses, the Excel and Stata 13 and E-Views 8 hypothesis were applied.

The regression analysis of this research is the Moderated Regression Analysis based on Sharma (1981)(15) model. The Moderated Regression Analysis is an analytical approach that in addition to maintaining the integrity of the sample, provides a basis to control of the impact of Moderated Regression Analysis. If the MRA uses for a predictor variable and to draw the regression coefficients, 3 regression equations should be examined.

1) \[ y = a + b_1 x + \epsilon \]
2) \[ y = a + b_1 x + b_2 z + \epsilon \]
3) \[ y = a + b_1 x + b_2 z + b_3 x z + \epsilon \]

If the second and third equations are not different from each other (i.e., \( b_3 = 0; b_2 \neq 0 \)), in this case the variable \( z \) is not moderator and it is only a predictor variable like \( x \). The first and the second equations need not to be different from each other but different from the third equation for \( Z \) to be a moderating variable (i.e. \( b_2 = 0; b_3 \neq 0 \)). If the first, second and third equations are different (i.e. \( b_2 \neq b_3 \neq 0 \)) then \( z \) is a semi moderating variable

This paper models are as following:

Model 1: Tobin’s Q=\( a+ \beta_1 Age+ \beta_2 Levreg+ \beta_3 NP+ \epsilon \)
Model 2: Tobin’s Q=\( a+ \beta_1 Board+ \beta_2 Deco+ + \beta_3 Age+ \beta_4 Levreg+ \beta_5 NP+ \epsilon \)
Model 3: Tobin’s Q=\( a+ \beta_1 Board+ \beta_2 Deco + \beta_3 Size+ \beta_4 Age+ \beta_5 Levreg+ \beta_6 NP+ \epsilon \)
Model 4: Tobin’s Q=α+β1Board+β2Deco+β3Size+β4S*BD+β5S*Deco+β6Age+β7Levreg+β8NP+ε
Tobin’s Q= (Market value of common stock + book value of liabilities) /assets book value).
Board (The board size): The number of members of the board per year.
Chair duality (If a person is the Chairman and CEO, dummy variable 1 is used and otherwise 0 is used).
Size (firm size) = natural logarithm (net sales).
Age (Firm Age) = (1392- number of years that the company has elapsed).
Levreg (financial leverage) = (total liabilities) / (total assets). 
NP (net profit margin) = (net profit) / (sales).
Size*BD (interactions between firm size and the number of the Board of Directors members). Size*Deco (Interaction of the firm size and chair duality).

As this research is considered as moderating, therefore, two independent variable and moderating variable should beat down. As Standard deviation of two variable are differ from each other Standardized values has used. Stata 13 is applied to conduct statistical operation in this study.

Descriptive analysis:
According to the descriptive statistics in Table 1, the distribution of these variables in different companies is low. The highest standard deviation is related to the net profit margin variable and the lowest standard deviation is related to financial leverage variable.

Table 1: The Results of Descriptive Test.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Symbol</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin’s Q</td>
<td>TOBIN’S Q</td>
<td>1.57</td>
<td>0.67</td>
<td>0.52</td>
</tr>
<tr>
<td>Board Size</td>
<td>Board</td>
<td>----</td>
<td>0.24</td>
<td>5</td>
</tr>
<tr>
<td>Chair Duality</td>
<td>Deco</td>
<td>----</td>
<td>0.94</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>Firm Size</td>
<td>13.56</td>
<td>1.64</td>
<td>18.4</td>
</tr>
<tr>
<td>Levreg</td>
<td>Financial Leverage</td>
<td>0.57</td>
<td>12.94</td>
<td>58</td>
</tr>
<tr>
<td>NP</td>
<td>Net Profit</td>
<td>19.92</td>
<td>16.49</td>
<td>103.70</td>
</tr>
</tbody>
</table>

To determine the stationary of the variables, Levin, Lin, Sh. (2002) test is as. P-value of all variables is less than 5%, it concludes that all variables are stationary during the study period. Then to assess the normality of the test, is Shapiro-Wilk the test. According to the results, P-value of the test for all data is more than 5%. After the stationary test, to check the normality Shapryvylk test is applied. Based on the results, the P-value of all variables are more than 5%, which indicates normality. To check multicollinearity Vif test is used. According to the results, there is no multicollinearity between the variables.

Panel Data Analysis:
To find out which of the Pool or panel model are more appropriate, the Breusch-Pagan test is applied (1980). Based on Table 2, random effects model is appropriate for research models. Then, Hausman test (1978) is applied to select the fixed effects and random effects models. According to Table 2 the P-Value is less than 5%, which represents fixed effects model is better to be selected. Therefore, the results of Breusch-Pagan and Hausman test, the fixed effects model is the most appropriate method for estimating parameters and testing hypotheses.

Heteroskedasticity test and serial correlation:
In this study Breusch-Pagan/ Cook-Weisberg test is applied to check Heteroskedasticity. The results are shown in Table 5 for all hypotheses. The results indicates that with respect to F-value and the significant level, that is more than 5%, there is no Heteroskedasticity. Wooldridge test (2004) is used to verify the serial correlation in research hypotheses. According to the Table 5, the significant level of serial correlation test is greater than 5%; which shows there is no Serial correlation between research hypotheses.

Hypotheses testing:
Table 2 shows the hypotheses results in four models. In the first model, the relationship between Firm Age (Age), financial leverage (levreg) and net profit (NP) as control variables are examined with Tobin’s Q as dependent variable. In the second model the board size, chair duality as independent variables are examined with Tobin’s Q as dependent variable and firm age (Age), financial leverage (leverage) and net profit (NP) as control variables.

DECO as independent variable with Tobin’s Q as the dependent variable and the firm size (size) as moderating variable and firm age (Age), financial leverage (leverage) and net margin (NP) are considered as control variables.

In the fourth model the board size and chair duality as independent variables are examined with Tobin’s Q as dependent variable and firm size (size) as moderating variable, and firm size interactions in board size
(Size*BD), firm size interactions in chair duality (Size*Deco) and firm age (Age), financial leverage (leverage) and net profit margin (NP) are considered as control variables.

The second model is related to the first hypothesis. As it is shown in Table 2 the second model has examined with the number of board members and chair duality as independent variables. Results indicate that the model is optimal to hypothesis. Significant level indicates that the model is significance to the test hypothesis. R square is 0.25 in this model and it has improved compared to the first model.

Hypothesis 1-1. There is a significant relationship between the number of board members and Tobin’s Q.

The number of board members as independent variables in the second model is -0.91 and its related standard deviation is 0.27. Considering P-value that is 0.36 at 95%, the board size variable has significant effect on the Tobin’s Q. As a result hypothesis (1-1) does not confirmed. According to Article 107 of the Commercial Law amendment the number of board members of public companies is 5 so the mentioned item affect the researchers’ results. This results are consistence with Bonn et al (2004) (16) and Nikbakht (1388) (17) findings.

Hypothesis 1-2. There is a significant relationship between chair duality and Tobin’s Q.

Chair duality as independent variable in the second model is -0.12 and standard deviation is 0.31. Considering R square that is 0.90 at 95%, chair duality variable has no significant effect on Tobin’s Q. As a result hypothesis (1-2) does not confirmed.

In the fourth model as it is shown in Table 2, the number of board members, chair duality as independent variables and firm size as a moderating variable and independent variables’ interactions were examined. The results has shown the model is optimal to hypothesis test. Significant level indicates the model is significant to the hypothesis. P-value is 0.28 in this model that it has got improved compared to the third model.

Hypothesis 2-1. Firm size strengthens the relationship between the number of board members and Tobin’s Q.

The number of board members as independent variables in the fourth model is -0.82 and standard deviation is 0.06 and as P-value is 0.41 at 95%, number of Board members variable has no significant effect on Tobin’s Q. Interactions of Board members in firm size (Size*BD) in the third model is 3.05 and the standard deviation is 0.29. Considering the P-value that is 0.00 at 95%, number of board members variable in firm size has a significant and positive impact on Tobin’s Q. So it can be concluded based on the representing theory, firm size is a factor that has a positive impact on the number of board members and Tobin’s Q and reinforce it. Hypothesis 2-1 will be accepted. According to Sharma analysis it can be concluded that the firm size is a complete moderating variable.

Hypothesis 2-2. Firm Size strengthen the relationship between chair duality and Tobin’s Q.

Chair duality as independent variable in the fourth model is 0.13 and standard deviation is 0.07. As p-value is 0.89 at 95%, chair duality variable has no significant impact on Tobin’s Q. Chair duality in firm size (Size Deco) in the fourth model is -0.39 and standard deviation is 0.05. As p-value is 0.69 at 95%, chair duality in firm size has no significant impact on Tobin’s Q and the hypothesis is rejected.

### Table 2: The Hypotheses Test Results

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Variable</th>
<th>P-</th>
<th>Std.</th>
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<th>P-</th>
<th>Std.</th>
<th>Beta</th>
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</table>

First model: the relationship between dependent variable and control variables
Second model: the relationship between dependent variable with independent variable and control variables
Third model: the relationship between dependent variable with independent variable, moderating variable and control variables
Fourth model: the relationship between dependent variable with independent variable, moderating and interaction dependent in moderating and control variables

* Description of page 4
Conclusion:

The present study has several limitations that cause results to be expressed with consideration. Uncontrolled variables such as economic and political conditions, type of activity, the firm age, global economy and the internal laws and regulations of the company can be counted as indicators influence research indicators, especially firm performance variable. The results of first hypotheses has shown there is not a significant relationship between corporate governance (the board size and the chair duality) and performance (Tobin’s Q). As it has mentioned in section 1 it can be concluded from the first hypotheses that the result of the present hypotheses is very sensitive to sample, and this is probably like the studies that the sample size were small due to limitations.

The second hypothesis test showed that firm size as a moderating variable strengthen the relationship between board size and performance (Tobin’s Q) of the companies. And firm size as moderating variable has no impact on the relationship between chair quality and performance of the companies.

The above results has shown the relationship between corporate governance mechanisms and performance depends on the firm size.

This study is very sensitive to sample. If the present sample is included the firms that are not very large then it can be said the firm size can affect this relationship. As a result, large companies has paid more attention to corporate governance according to cost and benefit fact that consequently their impact on the performance is visible. These evidence indicate that the firm size can be considered as a moderating factor. The results show the existence of complete moderating in hypothesis 2-1. Investors and managers can make better quality decisions by considering the firm size and the impact it can have on performance. Since the firm size as a moderating variable has a positive impact on the firm performance, Therefore, it is suggested to stock policymakers to legislate a series of new regulations to improve corporate governance under the firm size effect. Considering to the importance of corporate governance principles and on the other side the firm size it is recommended to investors and other stakeholders to consider these results in their decision making processes. Researchers can examine other parameters of corporate governance (independent auditors, internal auditors, institutional shareholders and family owner).

REFERENCES
