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Study of the Influence on Firm Performance by the Mechanism of Corporate Governance at Companies Listed in TSE

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Abstract: Desirable corporate governance targets the sound life of economic firms in long-term and for this reason, it intends to defend the shareholder's profits against the management of organizations. Considering the control and supervisory effect of mechanisms and corporate governance, the goal of this research is evaluate the impact of corporate governance on firm performance in the companies listed on TSE. By assuming the effect of corporate governance on firm performance, document mining and systematic elimination methods are used for sampling. F-Limer, Hausman, Xtserial and variance heteroscedasticity tests are used for analysis of study model. By pooled data, the study hypothesis is tested. Since, the between corporate governance and firm performance a significant correlation was not found, study hypothesis is not supported at confidence interval 0.95.

Key words: Corporate governance, firm performance, firms listed on TSE, document mining, systematic elimination, significant correlation

INTRODUCTION

Attention to the establishment of the corporate governance system and development of the corporate governance framework in such a way to be able to guarantee the interests of different groups through controlling the shareholders as direct supervisors is of high importance. Furthermore, empirical evidence insists on the fact that the direct supervision of individual shareholders can lead to chaos and crisis in the capital market whereas the ownership structure of companies active in TSE indicates the active presence of institutional investors and their determining role in the development of the capital market. Thus, policymakers in the internal corporate governance system need to pay special attention to the development of corporate governance frameworks, so that, besides considering the important role of institutional investors, they can determine and formulate the market development strategies.

In competitive environments managers should by means of performance measurement process, engage in the correct direction of affairs for progress in work and also for the organization's considered objectives and strategy in a conscious way. Success in the implementation of this process depends on continuous assessment and evaluation and constant improvement of organizational performance and its working elements. Based on rapid changes and developments and the increase in the potentials and capabilities of companies and organizations in today's world, the level of utility of the performance of each of the working elements in the organization and its sum can be highly important for the managers as a criterion for assessment of an organization's success.

Den Berghe states that performance is eventually the result of many associated factors in which corporate governance is only one possible element in the total collection of performance stimuli.

Andreou *et al*. (2014), in a study "Corporate governance, decisions of financial management and financial performance of company: evidences of marine industry" evaluated the relationship between corporate governance and financial performance of company and decisions of financial management as profit management and investment of company. It was found that there was a significant association between corporate governance indices and decisions of financial management and financial performance. The decisions potentially could reduce agency costs and improve financial management and performance of marine companies.

Stanwick and Stanwick (2010) investigated "The relationship between corporate governance and financial performance: a study on Canadian companies" and the obtained results showed that: the total performance of the board of directors affects corporate performance. Companies with a high level of accountability by the

board of directors have a better financial performance. There is an inverse and significant relationship between the independence of the board of directors and financial performance. Corporate governance is crucial in a company's ability for increasing financial positions. A board of directors that is determined by the insiders has a better performance for the company.

Gurbuz *et al.* (2010), in a study entitled "Corporate governance and financial performance with the prospect of institutional ownership: empirical evidence from Turkey" concluded that corporate governance and institutional ownership positively affect corporate performance.

Hassasyegane *et al.* (2009), in a study entitled "The relationship between the quality of corporate governance and performance of companies listed in TSE" came to the conclusion that there is no significant relationship between the quality of corporate governance and corporate performance. Based on the library studies conducted and also the different sites that were investigated and the studies that were done, the research topic was selected.

Based on the supervisory effect of corporate governance mechanisms, this study evaluates the effect of these mechanisms on financial performance. By assuming the positive relationship between corporate governance and financial performance and with the aim of determining the relationship between corporate governance and financial performance the companies listed on TSE, this study is evaluated.

MATERIALS AND METHODS

Type of research method: This study is a descriptive study and of post-event and correlative type which is based on the actual information of the financial statements of the companies recognized by Tehran Stock Exchange market and could be generalized to the entire statistical society inductively.

Data collection method: In the current study, document study technique was used. The information data were divided into two groups, data regarding the thematic literature and conducted study and data related to research hypothesis and variables. Both groups of these information data were extracted through document study. In other words, to collect data regarding the thematic literature, text study and internet search were used and this information was extracted from English and Persian books and articles as well as Persian thesis.

Information collection tools: The data regarding the hypothesis and variables of the financial statements, accompanying notes, minutes of meetings, reports of auditor and legal inspector, information databases of Tehran Stock Exchange market, documentary statistics of stock exchange market were extracted and Excel Software was used for grouping and calculation of variables upon data collection, so that, it could be made ready for analyses by the relevant softwares.

Statistical society and method of information analysis: The population of the present study consists of the companies listed in Tehran Stock Exchange (TSE). The period of this study is 5 years and includes the years between 2009 and 2013. In this study, the systematic removal method is used for sampling. For this purpose, from among the 535 companies existing in TSE at the end of 2013 by applying the following restrictions (Table 1), the primary population was reduced to 124 companies which were selected as the sample companies under study and their list as distinguished by industry and the number of selected sample, Table 2 is considerable.

The statistical methods: To analyze the data statistically and test the hypothesis of the research, two types of statistical methods were used:

- Descriptive statistics to use indicators such as average, mean, criterion deviation, skewness and kurtoisis
- Inferential statistics to use pre-assumption tests of regression model and multi-variable regression test

Following collection and preparation of the research variables using Excel Software, the statistical methods and tests of hypothesis were studied and analyzed using SPSS Software.

Model and variables under study: This study is descriptive-ex post facto and correlation design based on real data of financial statement of companies listed on TSE. It is generalized inductively to the entire study population.

Study model:

$$\text{Firm performance}_{it} = \beta_0 + \beta_1 \text{ corporate covernance}_{it} + \beta_2 \text{ control variable}_{it} + \varepsilon_{it}$$

Table 1: Selection of testable sample

Description	Number	Percentage
All the companies listed in exchange on 20.03.2014	535	0.100
Companies that have been listed in exchange after 2009	44	0.080
Companies that have been suspended or have exited the exchange during the period of study	124	0.230
Companies whose financial year does not end on March 20 or whose financial year has changed	92	0.170
Financial intermediation companies (investing, holding, leasing and banks)	18	0.030
Companies whose share, during the considered period, has not been actively traded in exchange	61	0.120
Companies which had not presented their 2013 financial statements when doing this study	3	0.010
Companies whose information was not enough for obtaining some research variables	69	0.130
The whole testable sample by considering the defaults	124	0.230

Table 2: Name of industries and number of selected samples

Name of industries	Number of samples
Extraction of metal ores	5
Automobile and manufacturing of parts	18
Machinery and equipment	4
Machinery and electronics	5
Chemicals	12
Food and beverage products except sugar	13
Pharmaceutical materials and products	15
Basic metals	9
Oil products, coke and nuclear fuel	5
Tile and ceramic	7
Rubber and plastics	8
Other non-metallic mineral products	8
Cement, lime and plaster	15
Sum	124

Independent variable: This variable indicates corporate governance as evaluated by scores of each company based on following criteria:

- The percent of ownership of share of company by board members
- The percent of share of institutional shareholders
- The number of blockholders with ownership percent of >5%
- The number of board members
- The committee of corporate governance in company
- The number of members of audit committee
- The percent of external managers of board
- CFO duality from the chief of board

To score the companies in terms of corporate governance index, after calculation of each of criteria for each company, the values are added and the required value indicates the corporate governance index. For example, alpha company shows ownership percent of board as 32% (0.032) and for the share of institutional shareholders as 21% (0.21), number of blockholders as 6, number of boards 5, the committee of corporate governance as 0 (due to the lack of committee), the number of audit committee is 6, the percent of external managers (non-executive) 80% (0.8) and duality of CFO is 1 (due to the lack of duality is 1). By adding the above items, corporate governance index for alpha company is 19.33 (1+0.8+6+0+5+6+0.21+0.32). The greater the value, the stronger the corporate governance.

Dependent variable: Firm performance$_{it}$; this variable shows the variable of corporate financial performance and Tobin's Q ratio is used for its calculation. Tobin's Q ratio equals the division of the company's market value into the book value of the company's assets.

Control variables of study:

- Control variables$_{it}$: this variable indicates control variables
- Firm size: it is the logarithm of assets of company
- Financial leverage: it is equal to the ratio of company debts to total assets
- Return on assets: it is the profit before abnormal items to total assets of company

The analysis of study models: In this study, to test the hypothesis, Estimated Generalized Least Squares (EGLS) is applied. The testing of hypothesis is explained in this study.

Descriptive statistics: Table 3 shows the descriptive statistics of variables of this model for 124 member companies during 5 years and indicates descriptive parameters for each variable separately. These parameters include central measures as mean, median, maximum, minimum and the data of dispersion indices as standard deviation, skewness and kurtosis. The most important central measure is mean indicating the balance of distribution and it is a good index to show the centrality of data. For example, the mean of financial leverage is 0.57 and it indicates that most of the data are dispersed around this value.

RESULTS AND DISCUSSION

Model analysis: In pooled data, at first F-Limer test is used to select between panel and pooled data methods. If F-Limer test is <5%, panel data, otherwise pooled data is used Table 4. As p-value of F-Limer test is <5%, to estimate the study models in hypothesis, panel data method is applied. To determine in which models in these hypothesis, fixed or random effects are used, Hausman test is applied. The results of test in Table 5 show using fixed effects method for hypothesis.

The evaluation of classic assumptions and estimation of model and results analysis: Based on using pooled data in estimation of study models, we evaluated non auto-correlation and variance consistency.

The evaluation of non-auto correlation in study models: X t_{serial} test is used to detect the auto-correlation of one of the existing tests. This test is presented by Wooldridge. Its advantage compared to Durbin-Watson test is that besides first rank auto-correlation, other types of auto-correlation are detected and if the data is pooled, this test is used. Table 4 shows the results of auto-correlation test for testing the model in hypothesis. As p-value in Table 6 for hypothesis is less than significance level 5%, the model in these hypothesis has auto-correlation.

The evaluation of variance heteroskedasticity in study models: Table 7 shows that results of variance Heteroskedasticity to test the models of hypothesis. If p-value is less than significance level 5%, H_0 regarding the variance consistency is not supported and the model has variance heteroskedasticity . As p-value in Table 5 in study hypothesis is less than significance level 5% and the models in both hypothesis have variance heteroskedasticity. To eliminate this problem, Estimated Generalized Least Square (EGLS) is applied.

Hypothesis test: The hypothesis evaluates the relationship between corporate governance and optimal investment. To test this variable, this hypothesis is as statistical hypothesis H_1 (supporting) and H_0 rejection:

- H_0: corporate governance has no effect on firm performance
- H_1: corporate governance positively affects firm performance

This hypothesis is generalized by EGLS and pooled data. The results are shown in Table 8. After being sure of classic assumptions, to estimate the model, based on variance heteroskedasticity, EGLS method and pooled data are applied. Table 8 indicates the results of estimation of model for hypothesis briefly. Based on the results in this Table 8 p-value of F statistics is <5%, the model is significant at confidence interval 95% and based on coefficient of determination (0.181), the model is valid. Also, p-value for independent variables as <5% has significant relationship with dependent variable (firm performance). Thus, at first significance is defined and then, the effect of significant variables is defined by estimation coefficients. Based on the fact that p>0.05, Thus, study hypothesis is not supported at confidence interval 0.95.

Table 4: The results of F-Limer test of hypothesis

	F-limer test		
Hypothesis	Statistics	Statistics probability	Result
Study hypothesis	F = 4.46	0.000	Panel data

Table 5: The results of Hausman test of hypothesis

	Hausman test		
Hypothesis	Statistics	Statistics probability	Result
Study hypothesis	X2 = 661.46	0.001	Fixed effects

Table 6: The results of Wooldridge test of study models

	Wooldridge test		
Hypothesis	Statistics	Statistics probability	Result
Study hypothesis	F = 22.62	0.000	Autocorrelation

Table 7: The results of Heteroskedasticity variance test of study models

	Wooldridge test		
Hypothesis	Statistics	Statistics probability	Result
Study hypothesis	441.76 = X2	0.017	Variance Heteroskedasticity

Table 8: The results of estimation of model for second hypothesis by EGLS method

Variables	Estimated coefficients	SE	t-statistics	p-values
Intercept ($\bullet_0$)	4.230	0.162	4.041	0.003
Corporate governance	0.674	0.081	0.726	0.204
Age	0.086	0.134	2.829	0.023
Cash flow (Cfo)	0.247	0.463	3.462	0.036
Dividend	0.097	0.671	3.731	0.017
Size	0.726	0.164	1.087	0.105
Financial Leverage (LEV)	0.073	0.058	3.967	0.010

Firm $performance_{it} = \bullet_0 + \bullet_1$ corporate $governance_{it} + \bullet_2$ control $variable_{it} + \bullet_{it}$; Co-efficient of determination: 0.181; Adjusted coefficient of determination: 0.16234.639; F-statistics: 0.007; Statistics significance: F-Durbin-Watson: 1.864

CONCLUSION

Data analysis as a scientific stage is one of the bases of each scientific study by which all study activities are directed. At first, the descriptive statistics of study data are explained. Descriptive statistics include collection,

summary, classification and descriptive of numerical facts. For data analysis and hypothesis test, reliability test on variables and error term, estimation test as panel or pooled data, fixed or random effects test and model parameters estimation are performed.

Then, the study model was analyzed for hypothesis test. The results of hypothesis test showed that the hypothesis not accepted at confidence interval 95%. The results of testing this hypothesis are aligned with the critical findings by Yeganeh *et al.* (there is no significant relationship between the quality of corporate governance and corporate performance) but are in conflict with the results of the research findings by Nikoumaram and Salleteh (2010) (the total performance of the board of directors affects corporate performance) and Gurbuz *et al.* (2010) (corporate governance and institutional ownership positively affect corporate performance).

LIMITATIONS

The findings of this study are not generalizable to the companies outside the stock exchange. With the presentation of sequential and comparative financial statements of companies, the conflicting nature of information is one of the most important financial limitations. As a result, the researcher has accepted the data re-presented in the subsequent year.

The effects of the existing inflation in Iran's economy may affect the data inserted in the financial reports and the research results; Ineffectiveness of the capital market in Iran as an important and effective factor can affect the research results.

The effects of the difference between the companie's accounting and financial reporting methods can affect the research results; Restrictions arising from the regulations governing Iran's capital market; Not considering the possible effects of contents of audit reports on the set of companies under study in this research.

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