

## **INVESTIGATING THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE MECHANISMS WITH CORPORATE RISK- TAKING AND STOCK RETURN OF LISTED COMPANIES IN TEHRAN STOCK EXCHANGE**

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### **ABSTRACT**

The present research is generally purposed to investigate the relationship among some of corporate governance mechanisms in stock return for enterprises and their risk-taking in different industries. This study is of applied type based on its goal and it is of descriptive and correlation type in terms of method. The statistical population of the current research comprises of the admitted enterprises in Tehran Stock Exchange (TSE) among of which 40 enterprises have been selected as statistical sample by means of systematic deletion sampling technique. The period of conducting this study was ranged from 2008 through 2013. E-view software (v.7) has been employed for data analysis and inferential statistics in this study and also SPSS software (v.20) was utilized for testing the hypotheses. At last, the multivariate regression has been exploited to test the classified hypotheses. The research findings indicate that of 9 studied corporate governance mechanisms in this study, two mechanisms (i.e. the major or minor nature of enterprise and separation of organizational positions of managing director and chairman of board of directors) are negatively and significantly related to variable of stock return. Similarly, among 9 studied corporate governance mechanisms in this investigation, four mechanisms (corporate ownership structure, institutional investors, rate of ownership by the greatest shareholder, and rate of government's influence and ownership) are positively and significantly related to variable of corporate risk-taking.

**Keywords:** *Corporate Governance, Stock Return, Corporate Risk-Taking*

### **INTRODUCTION**

The corporate governance is one of the pivotal subjects, which improve the business climate. Bankruptcy and scandal of some enterprises such as Enron, Arthur Anderson, and WorldCom in US and other great companies like Seiko, Lion set, Sun Beam, and Tikko in other countries in the world purposed the necessity for creation of corporate appropriate strategic systems as one of the foremost issues in light of weak corporate governance in all of the countries (Ansari et al, 2012). The presence of strong and profitable corporate governance may improve stock return and suitable risk- taking to achieve the goals in the enterprises (Baradaran Hassanzadeh et al, 2012).

### **A REVIEW ON THEORETICAL BASES AND RESEARCH HISTORY**

#### **Theoretical bases**

The restriction of corporate decision makers to following up their personal benefits is the main subject in corporate governance studies in order to create optimal value-driven behavior in the given company. The studies which were conducted by Amihud and Lev (1981), Hirshleifer and Thakor (1992), and Holmstrom and Ricarti Costa (1986) indicated that the directors might avoid from execution of risky project because of their own personal concerns even those projects, which might add to corporate value. They may spend corporate resources for diversification of corporate operation in several types so that not to incur corporate risk by their job. Similarly, they expressed that support by investor and thus the efficient supervision may create comfort and assurance in such conservative behaviors. The corporate risk-taking

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can be defined as accepting risk or acknowledgement of loss or damage to achieve the given goal. Thus, the risk-taker company is an enterprise that is not satisfied often with the status quo unlike the cautious and risk-phobic enterprises and it is ready to incur risk and occurrence of loss and damage to some degree in order to achieve higher objectives (Izadinia and Resaeian, 2012). The stock return means total group of interests, which are devoted to stock during a period. This period may be daily, weekly, monthly, yearly, and or any other time period proportional to type of study and research.

### **A review on research history**

Baradarn Hassanzadeh et al (2012) examined the relationship among some of the corporate governance mechanisms and the created value for shareholders and economic value-added. The results of this study show that out of 8 mechanisms of corporate governance, 4 mechanisms (i.e. the rate of government influence and ownership, the rate of ownership of institutional shareholders, capital structure, and rate of free floating stocks) are related to the created value for shareholders. Similarly, 3 mechanisms (i.e. the rate of government influence and ownership, the rate of ownership of institutional shareholders, and rate of free floating stocks) are related to economic value-added. Modares et al (2009) have investigated the effect of institutional shareholders on stock return for shareholders in TSEO. The results of this study indicate that despite of this fact that the institutional ownership is extremely high in the admitted enterprises in TSEO, there is no significant relationship between institutional shareholders with stock return. Nousheen Tariq Bhutta and Syed- Zulfiqar Ali Shah (2013) have explored the effect of corporate governance on investor's reaction. Their findings show that the corporate governance mechanisms had no effect on investors' reaction and this is a negative relationship. Hardjo Kerviadi et al (2010) have analyzed the relationship among corporate governance mechanism and stock return in the admitted enterprises in New Zealand Bourse market. Their results signified that board of directors and investors' rights were significantly related to risk non systematic levels.

## **METHODS AND RESEARCH TOOLS**

### **Statistical population**

The statistical population in this study includes all the admitted enterprises in TSEO in 13 industries within time range 20/03/2008- 19/03/2013.

### **Statistical sample**

The given enterprises were selected from this population with respect to the following qualifications:

1- Their fiscal year should be ended to the end of Iranian calendar year (March 20<sup>th</sup>); 2- The contractual pause in these companies should not exceed from 3 month maximally, except for the related pauses to holding the stock general meetings; 3- They should not be included in investment companies, banks, monetary and holding institutions; 4- The loss-incurring companies have been omitted; 5- Their information should be available; and 6- The fiscal period should not vary during research career. Finally, after observation of the above conditions and implementation of deleting sampling, 40 companies have been selected as sample among the existing 442 enterprises.

### **Methodology**

This study is included in the applied research based on goals of study and it is of descriptive and correlation type in terms of nature and method.

### **Research time period and location**

The time of this study ranged from March 20<sup>th</sup> 2008 through March 19<sup>th</sup> 2013. The research spatial domain includes the admitted enterprises in TSEO.

### **Method of data collection**

Two librarian and field study techniques were employed for data collection. The needed data have been gathered from data in TSEO by means of Rahavard Novin software (v.3) as well as the specialized books

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and journals. E-view 7 software has been utilized to analyze data for the given tests and descriptive statistics and also SPSS-20 software was used for inferential statistics and to test hypotheses. At last, we employ the multivariate regression for cross-sectional data and time-series to determine the relationship among independent and dependent variables.

### Research variables and way of their measurement

#### Corporate governance variables

The corporate governance variables, which are the independent variables in this study, will be measured as follows:

**Table (1): Way of calculation of independent variables**

Title of variable	Operational definition
Separation of organizational position of managing director from chairman of board of directors	If one person is responsible for positions of managing director and chairman of directorate the score one is calculated otherwise zero score is set.
Structure of board of directors	The ratio of non- duty members of directorate to total members of board of directors
Rate of ownership by the greatest shareholder	The percentage of stocks owned by the greatest shareholder of company
Corporate ownership structure	Total percentage of the owned stocks by shareholders with higher than 5% shares
The major or minor nature	If the given company is under control by other enterprise score one is calculated otherwise zero score should be considered.
The rate of government's influence and ownership	If government or the similar institute is the greatest shareholder the score one is selected otherwise zero score should be chosen.
Free floating stock percentage	The amount of stocks, that is expected to be negotiable in near future
Corporate auditing body	If financial statements are audited by public body (Auditing Organization) score 1 is selected otherwise (auditing body) zero should be allocated.
Institutional investors	The ratio of quantity of ordinary stocks available for investment and commercial companies to total number of corporate ordinary stocks

#### Variable of stock return

The stock return can be computed by means of the following formula:

$$r_{it} = \frac{(P_t - P_{t-1}) + D_t}{P_{t-1}} \times 100 \quad (1)$$

Where:

$P_t$  = Stocks price at the end of period t

$P_{t-1}$  = Stocks price at the beginning of period t or the end of (t-1)

$D_t$  = The resultant benefits from stock ownership that has been devoted to shareholder during period t

#### Variable of corporate risk-taking

In this study, the following model is used for variable of corporate risk-taking:

$$\sigma_{i,c} = \sqrt{\frac{1}{T-1} \sum_{t=1}^T (E_{1,c,t} - \frac{1}{T} \sum_{t=1}^T E_{1,c,t})^2} \quad |T > 5 \quad (2)$$

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$N$  = Total number of enterprises

$EBIT$  = Total operational earnings after deduction of depletion

$A$  = Total assets

**RESULTS AND DISCUSSION**

**Findings of descriptive statistics of research data**

We extract statistics of descriptive data by means of data from 40 enterprises and through review of EXCEL file in SPSS-20 software. Descriptive statistics are some part of statistical data in which the information is collected, summarized, displayed, and processed without any conclusion along with that statistical data.

**Limer F-test findings**

It should be first characterized in the combinatorial data part that whether there is individual difference or so-called heterogeneity in the given sections and or the sections are homogeneous. And for this approximation the statistical data should be accumulated together so that approximation can be done by OLD ordinary technique (Polling Data) and or if panel data technique may be more appropriate. The existing heterogeneity can be identified among sections by means of Limer F-test. Null hypothesis of F-statistic is based on homogeneity of sections (polling data in statistical data). If null hypothesis is rejected the opposite hypothesis is approved according which there is heterogeneity among sections (paneling of statistical data). The results of F-test are reflected in the following table.

**Table (2): The results of Limer F-test for stocks return model**

Title of Statistic	Statistics value	Probability
Cross-section F	1.5667	0.0303
Cross-section Chi-Square	70.3272	0.0015

The results of Table (2) represent rejection of null hypothesis and the existing heterogeneity of sections at level 5% and in fact they express the appropriateness of panel data technique to estimate model.

**Table (3): The results of Limer F-test for corporate risk- taking**

Title of Statistic	Statistics value	Probability
Cross-section F	0.6979	0.9044
Cross-section Chi-Square	34.407	0.6792

The results of Table (3) signify confirmation of null hypothesis and imply lack of heterogeneity of section at level 5% and in fact they express the appropriateness of pooling- data technique for estimation the model.

**Findings of Hausman test**

After identifying that there is some heterogeneity in cross-sections and the individual difference can be considered and also the combinatorial data techniques are appropriate for estimation of stock return, it should be characterized that approximation error is due to change in cross-sections and or it has occurred over the time. According to Hausman test, its null hypothesis is based on stochastic nature of the estimated errors, which their results are given in the following table.

**Table (4): Hausman test results**

Chi-Sq. Statistic	Probability
19.1012	0.0593

The results of Hausman test in Table (4) for stock return may interpret that null hypothesis has not been rejected in this case and random effect is appropriate for estimation of model.

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**Testing of hypotheses and the given results**

**Testing of first hypothesis:**

The following table (5,6) displays the results of testing hypothesis regarding stock return.

**Table (5): The results of testing the first major hypothesis (Stocks return)**

Title of variable	Symbol	Coefficient	t-statistic	P-value
Fixed value	C	5.978	2.599	0.010
Major or minor nature of enterprise	AFS	-2.801	-2.303	0.022
Separation organizational positions of managing director and chairman of directorate	TPS	-2.075	-2.755	0.006
Rate of ownership by the greatest shareholder	MBS	-0.568	-0.132	0.895
Corporate auditing body	MHS	-1.662	-1.288	0.199
Rate of government's influence	MND	-1.767	-1.087	0.278
Structure of board of directors	SHM	-1.123	-0.831	0.407
Percentage of free floating stocks percentage	SSH	-0.282	-0.413	0.680
Corporate ownership structure	SMS	0.759	0.561	0.576
Institutional shareholders	SNA	1.043	1.423	0.156
Size of enterprise	SIZ	-1.030	-0.285	0.776
Financial leverage	DOL	0.284	0.256	0.798

**Table (6): The results of Total regression model first major hypothesis**

Total regression model	F-statistic	P-value	Durbin-Watson (D-W) statistic	R <sup>2</sup>	ADJ-R <sup>2</sup>
	2.155	0.019	1.740	0.112	0.060

With respect to approximation of combinatorial data model by Limer F-test and Hausman test as well as test coefficients of the hypotheses, now the regressive model is presented for variable of stocks return as follows:

$$SRE = -22.14 + 0.76(TPS_{i,t}) + 66.84(SHM_{i,t}) + (-0.14)(MBS_{i,t}) + (-8.98)(SMS_{i,t}) + 1.60(AFS_{i,t}) + (-3.07)(MND_{i,t}) + (-4.97)(SSH_{i,t}) + 0.45(MHS_{i,t}) + 0.17(SNA_{i,t}) + (-3.04)(DOL_{i,t}) + (-4.82)(SIZ_{i,t}) + \epsilon_{i,t}$$

**Testing of second hypothesis:**

The following table indicates the results of testing second hypothesis for variable of corporate risk-taking.

**Table (7): The results of testing the second major hypothesis (Corporate risk-taking)**

Title of variable	Symbol	Coefficient	t-statistic	P-value
Fixed value	C	-0.059	-3.249	0.001
Major or minor nature of enterprise	AFS	0.009	0.969	0.334
Separation organizational positions of managing director and chairman of directorate	DOL	-0.004	-0.713	0.477
Rate of ownership by the greatest shareholder	MBS	0.074	2.173	0.031
Corporate auditing body	MHS	-0.016	-1.537	0.126
Rate of government's influence	MND	0.044	3.437	0.001
Structure of board of directors	SHM	0.016	1.447	0.149
Percentage of free floating stocks percentage	SIZ	-0.006	-1.116	0.266
Corporate ownership structure	SMS	0.055	5.122	0.000
Institutional shareholders	SNA	0.019	3.232	0.001
Size of enterprise	SSH	2.137E-12	0.745	0.457
Financial leverage	TPS	0.036	4.148	0.000

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**Table (8): The results of Total regression model in second major hypothesis**

Total regression model	F-statistic	P-value	Durbin-Watson (D-W) statistic	R <sup>2</sup>	ADJ-R <sup>2</sup>
	9.020	0.000	1.798	0.345	0.307

With respect to approximation of combinatorial data model by Limer F-test and Hausman test as well as coefficient of testing hypotheses, now the regressive model is purposed for variable of corporate risk-taking as follows.

$$\begin{aligned}
 \text{RTK} = & 1276.8 + 367.77(\text{TPS}_{i,t}) - 227.96(\text{SHM}_{i,t}) + (-46.31)(\text{MBS}_{i,t}) + 17.97(\text{SMS}_{i,t}) + (-609.87) \\
 & (\text{AFS}_{i,t}) + 261.25(\text{MND}_{i,t}) + (-2172.43)(\text{SSH}_{i,t}) + 398.58(\text{MHS}_{i,t}) + 35.89(\text{SNA}_{i,t}) + (-3.43)(\text{DOL}_{i,t}) \\
 & + (-228.036)(\text{SIZ}_{i,t}) + \epsilon_{i,t}
 \end{aligned} \tag{4}$$

**DISCUSSION**

In table 6 , The significance level of F-statistic may be acceptable for error level less than 5% so the regressive model is totally significant. Namely, P-value is smaller than level ( $\alpha = 0.05$ ). The quantity of the adjusted determination coefficient is 0.112 and this signifies that the used regressive model may explain about 0.112% of variance of the dependent variable. In table 5, Variable of separation of organizational positions of managing director and chairman of directorate is negatively and significantly related to stocks return. Variable of major or minor nature is negatively and significantly related to stocks return. There is no relationship among free floating stocks with stocks return. The variable of corporate ownership structure is not related to stocks return. Also there is no relationship among structure of board of directors and stocks return. Institutional shareholders are not related to stocks return. The variable of corporate auditing body has no relation with stocks return. The rate of ownership by the greatest shareholder is not related to stocks return. The rate of government’s influence and ownership has no relation with stocks return. In table 8 , The significance level of F-statistic is higher than the acceptable error level (5%) and total regression is insignificant in terms of the given significance level. In other words, P-value is greater than level ( $\alpha = 0.05$ ). In table 7, the variable of separation of organizational positions of managing director and chairman of directorate is not related to corporate risk-taking. The variable of major or minor nature of enterprise has no relation with corporate risk-taking. Percentage of free floating stock is not related to corporate risk-taking. The variable of corporate ownership is positively and significantly related to corporate risk-taking. The structure of board of directors has no relation with corporate risk-taking. The institutional shareholders are positively and significantly related to corporate risk-taking. The variable of corporate auditing body has no relation with corporate risk-taking. The rate of ownership of the greatest shareholder is positively and significantly related to corporate risk-taking. The rate government’s influence and ownership has positive and significant relationship with corporate risk-taking.

**CONCLUSION**

This investigation is generally aimed at contribution to better recognition of corporate governance phenomenon in stock returns in enterprises and their risk-taking within different industries. Of other objectives of the present research one can refer to internalization of corporate governance concepts as well as making effort to increase the indicated efficiency for this issue and its effect on corporate stocks return and value- creation by risk – taking. Rahavard Novin -3 was employed to collect data in this study. The research data have been gathered from the studied enterprises from March 20<sup>th</sup> 2008 through March 19<sup>th</sup> 2013. E-views software (v.7) was utilized to analyze data in the given tests and descriptive statistics and also SPSS software (v.20) was used for inferential statistics in testing the hypotheses. Finally, we use multiple regressions of cross-sectional data and time-series to determine the relationship among independent and dependent variables. The results of study show that among 9 studied corporate governance mechanisms in this investigation, two mechanisms (i.e. major or minor nature of enterprise and separation organizational positions of managing director from chairman of board of directors) are

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negatively and significantly related to stock return. Likewise, of 9 studied corporate governance mechanisms, four mechanisms (corporate ownership structure, institutional investors, the rate of ownership by the greatest shareholder, and rate of government's influence and ownership) are positively and significantly related to corporate risk-taking.

### **REFERENCES**

- Ansari Ab Me , Nadari, Mo and Ebrahimi Kh (2012).** The analysis on relationship among corporate leadership criteria and evaluation criteria of performance with respect to valuation aspect, 10<sup>th</sup> national Iranian conference on accounting, Al-Zahra university Tehran 83-101.
- Baradaran Hassanzadeh, Rasoul, Badavar Nahandi, Yunes Y Hossein Babaei Ghader (2012).** The survey on relationship among some corporate governance mechanisms with the created value for shareholders and economic added-value , accounting and auditing reviews, career 19<sup>th</sup> 2 1-16.
- B. Elisabetta , H . Grove (2013) .** The Relationship between Earnings Quality , Control Mechanisms of Corporate Governance , and Future Stock Price Returns : The Case of the Netherlands. *Journal of Finance* , 3 (3) ,212-234.
- Fakhari H & Taheri E.S (2010).** The review of the relationship among institutional investors and fluctuation of stock returns in the admitted enterprises in TSEO, financial accounting researches 6. 159-172.
- Imani Barandagh, Mohammad, Jabarzadeh Kangarlooei, Abbasi Astemal, Mohammadreza & Mahmoudzdeh Baghbani, Saeed (2010).** Interpretation of relationship among corporate governance mechanisms (corporate leadership) and stock price return in the admitted enterprises in Tehran Securities and Exchange Organization (TSEO), National conference on role of transparency of accounting data in solving the current financial crises 252-271.
- Izadinia N and Amirresaiyan A (2012).** The relationship between some of corporate regulatory – leadership tools with economic and financial criteria for evaluation of performance, accounting science 1<sup>st</sup> year 1 53-72.