

## Corporate governance system and efficiency of firms (Case study: Companies listed on Tehran Stock Exchange)

Mostafa Mansour Ghanaei

Master of Accounting, Shahid Beheshti University, Tehran, Iran

**Abstract:** The corporate governance system consists of laws, regulations, structures, processes, cultures and systems which achieve the objectives of accountability, transparency, justice and respecting the stakeholders' rights. This study seeks to examine the relationship between the corporate governance system as the independent variable through the mechanisms (variables): The percentage of institutional investors' ownership, the percentage of independent board members, presence of internal auditor, and corporate information transparency with the stock return (common and non-common stock) and the stock price as the dependent variables. The firm size and systematic risk are also entered into the model as the control variables. In this regard, 118 member companies on stock exchange are selected as samples by targeted sampling method; and Pearson correlation coefficient and ordinary least squares (OLS) econometric method are utilized to test the hypotheses and analyze data. The results suggest that there is a significant correlation between the corporate governance and the stock price and return of listed stock exchange companies and only the information transparency has no significant impact on the stock price and return. The highest correlation is between various governance mechanisms and the dependent variables associated with the correlation between independent directors and return on common stock (with the positive coefficient of 0.73), the correlation between investors' ownership and return on non-common stock (with the positive coefficient of 0.59) and the correlation between investors' ownership and stock price (with the positive coefficient of 0.79).

[Mostafa Mansour Ghanaei. **Corporate governance system and efficiency of firms (Case study: Companies listed on Tehran Stock Exchange)**. *J Am Sci* 2019;15(1):77-85]. ISSN 1545-1003 (print); ISSN 2375-7264 (online). <http://www.jofamericanscience.org>. 12. doi:10.7537/marsjas150119.12.

**Keywords:** Corporate governance, institutional investors' ownership, independent board members, internal auditor, information transparency

### 1 - Introduction

Despite the fact that the large firms and separation of ownership from management at the global level have been occurred since the late nineteenth and early twentieth centuries, and the rules and regulations for corporate management have been existed until the 1990s, the subject of Corporate Governance is the current meaning was raised in 1990s in England, America and Canada in response to the problems posed by board efficiency in large companies (Hassas-Yeganeh, 2006).

The literature review indicates that there is no agreed definition on corporate governance and there are significant differences in the definitions in each country. From one perspective, the corporate governance is limited to the relationship between the firm and shareholders. This is an old model which is expressed in terms of representation theory. Furthermore, the corporate governance can be considered as a network of relationships which is existed not only between the company and its owners (shareholders), but also between a large numbers of stakeholders including the employees, customers, sellers, bondholders and so on. Such a viewpoint can be considered as the stakeholder theory (Hassas-Yeganeh, Moradi and Eskandari, 2008). The general

survey of corporate governance definitions in the scientific literature indicates that all of them have certain and common characteristics one of which is the accountability (Hassas-Yeganeh, 2005).

As a comprehensive definition, the corporate governance is a set of relationships among the shareholders, directors and auditors in a company and establishes a control system to guarantee the shareholders' rights of and properly implements the approvals of assembly and prevents the possible malicious practices. This rule, which is based on the accountability system and social responsibility, is a set of duties and responsibilities which should be performed by corporate units in order to lead to the accountability and transparency (Davani, 2009).

The corporate governance system is itself affected by external factors such as the regulatory oversight, legal regime, the efficiency of capital markets, major shareholders' oversight, monitoring the institutional investors, monitoring the minority of shareholders, making the independent auditing mandatory, and rating agencies, etc, as well as the internal organizational factors including the board of directors, executive directors, non-executive directors, internal controls, corporate ethics and so on (Ghanbari, 2007).

The corporate governance system as an independent variable can be correlated with the corporate performance as the dependent variable through the mechanisms (variables): The percentage of institutional investors' ownership, the percentage of independent board members, presence or internal auditors, and defined information transparency.

The stock price and return as the most important criteria of Stock Exchange Performance Measurement are seriously taken into account by financial markets in the world (Pourheidari, 2009). The stock price as the index which fully reflects the corporate performance and efficiency plays a wonderful role in attracting the investors; and the stock return fully reflects the performance evaluation based on the market value and corporate financial performance. The efficiency in the process by investors is a driving force which makes the motivation and considered as the rewards for investors.

Numerous foreign studies have focused on the significant correlation between the corporate performance and governance. (Joanna, 2008; Bauer et al, 2008; Lin, Ma, and Su, 2010; Khurram Khan, 2011; and several other studies) Some domestic studies have also investigated the correlation between the structure of corporate ownership and performance and all of have confirmed the correlation between these two categories. (Ghanbari, 2007; Mashayekhi and Esmaceli, 2006; Namazi and Kermani, 2008)

Therefore, the main question of this research is whether there is a correlation between the mechanisms of corporate governance system (institutional investors, independent board members, internal auditors, and information transparency) with the corporate performance (stock price and return) on Tehran Stock Exchange?

## 2- Materials and Methods

This research is a descriptive study which seeks to describe the relationship between the variables (dependent and independent) through the statistical tests. Furthermore, this study is applied in terms of objective and the Ex post facto research according to the data collection since it utilizes the past data of sample firms.

The studied population in this study consists of the companies listed on Tehran Stock Exchange; their fiscal years ended in March and their information is available. To determine the target samples in this study, the purposive sampling method is utilized according to various stock exchange companies, their activities and their different sizes, etc. In other words, the conditions are defined for a homogeneous statistical sample and the companies considered as the research samples which have the target conditions. Among all listed companies, the companies, which

meet all following conditions, are considered as the samples:

- In order to provide a homogeneous statistical sample in terms of number of companies, the companies are considered as the samples which are listed on Stock Exchange before 2004 and their symbols are not removed from Stock exchange board until the end of 2009.

- For greater reliability of estimated results, all listed companies except for the financial intermediary and investment companies are among the samples because the nature and type of intermediary and investment companies are different with all other companies.

- To select the active stock market companies, the ones with exchange the stock at least every 3 months are chosen as the samples.

- The companies should not be faced with failure during the fiscal year.

According to the conditions above, about 118 companies are considered as the research samples. In fact, among 467 stock companies, all companies eligible for target conditions are selected by purposive sampling method.

The data collection method in this study is the library method in which the required information are extracted from local papers and especially the foreign ones and as well as the Internet sources. Moreover, the information available in the Library of Stock Exchange and documents and financial reports of stock exchange companies, and the accounting data of "Tadbirpardaz" and "Rahavard Novin" software are utilized.

The applied model in this study is as follows:

$$R_1 = C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_i$$

$$R_2 = C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_i$$

$$PFY = C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_i$$

In the equation above, C is a constant coefficient,  $\varepsilon_i$  is the error term and  $\beta_1$  to  $\beta_4$  are the coefficients of independent variables or the corporate governance mechanisms, R1 is the common return, R2 is the non-common return and PFY is the corporate stock return.

C: constant coefficient;

$X_1$ : Institutional investors' ownership;

$X_2$ : Independent board directors;

$X_3$ : Internal Auditor;

$X_4$ : Transparency;

PFY: Corporate stock price;

$R_1$ : Common return;

$R_2$ : Non-common return.

$\varepsilon_i$ : Error term;

After developing the model, the coefficients of independent variables (information transparency, internal auditor, institutional investors, independent board members) and measurement of their impact on the dependent variables (stock price, stock return and

non-common return), we will utilize the econometric method and ordinary least squares regression (OLS), Student's t test and Pearson correlation coefficient to confirm or reject the hypotheses and explain the relationship between the dependent and independent variables.

The coefficients of independent variables are estimated and analyzed by software such as Eviews, Excel and SPSS and after estimating the model and the coefficients and statistics such as the t and F statistics through the econometric method, we can make decision about confirming or rejecting the hypotheses and the effectiveness of independent variables on dependent variables and the their signs.

### 3 - Results

The main variables in this study are as follows: The percentage of institutional investors' ownership, percentage of independent board directors, presence of internal auditor, information transparency; and the dependent variables: stock price (stock price at the end of fiscal year PFY, stock return (common return, non-common return) and control variables including the firm size and systematic risk.

#### 3-1- statistical description of data

Descriptive statistics of variables are presented in the following table:

Table 1: Descriptive statistics of research variables

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Investors' ownership	117	.10	56.70	28.7667	16.76386	.041	3.050
Internal Auditor	117	0	1	.53	.501	.105	3.024
independent directors	117	29	100	55.33	13.856	.942	2.990
Information transparency	117	23.00	655.00	303.9316	163.06534	.210	3.031
Firm size	117	34181.00	787209.00	183060.3846	176570.63686	0.105	3.098
Systematic risk	117	-3.09	129.18	63.9595	39.15086	.039	3.346
Common return	117	-49.94	504.41	31.2078	72.39669	0.874	3.041
Non-common return	117	-169.89	179.87	13.2030	39.50546	.588	3.136
Stock price	117	318	17600	2653.21	2243.102	0.133	3.036

According to obtained skewness coefficients with the values equal to zero for all variables, the hypothesis of symmetric distribution can be accepted and the mean can be utilized as the representative of central tendency and the standard deviation (SD) as the dispersion representative. It also can be observed

that the kurtosis coefficients of all variables are around 3, thus the distribution can be assumed normal.

#### 3-2- Data normality investigation

The SPSS output table in this regard is as follows:

Table 2: Normality test of One-Sample Kolmogorov-Smirnov Test

	Investors' Ownership	Internal Auditor	Independent directors	Information transparency	Firm size	Systematic risk	Common return	Non-common return	Stock price
N	117	116	117	117	117	117	117	117	117
Kolmogorov-Smirnov Z	1.132	3.809	2.035	1.292	2.617	1.175	2.832	2.446	1.715
Asymp. Sig. (2-tailed)	.154	.058	.065	.071	.067	.126	.080	.095	.073

It is observed that the significance level (Sig) for all variables is higher than 0.05, thus the data normality is approved for all variables and the utilization of parametric tests and models is permitted.

Pearson correlation coefficient is applied to investigate the correlation between the independent and dependent variables.

#### 3-3- Investigation of first hypothesis

- There is a significant correlation between the corporate governance and return on common stock of companies listed on stock exchange.

Table 3: Testing the first hypothesis

Variables	Investors' ownership			Internal Auditor			Independent directors			Information transparency		
	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N
Common return	0.623	0.042	117	0.51	0.03	117	0.73	0.01	117	0.13	0.55	117

According to the results of table above, since the significance levels (Sig) of variables, the investors' ownership, internal auditors and independent directors, are less than error level ( $>0.05$ ), thus it can be claimed by confidence of 95% that there is a significant correlation between the investors' ownership with a positive coefficient of 0.623 (sig= 0.042), internal auditor with a positive coefficient of 0.51 (sig= 0.030) and independent directors with a positive coefficient of 0.73 (sig=0.01) with return on common stock of

companies listed on stock exchange. According to the obtained correlation coefficients, the independent directors and return on common stock with a positive coefficient of 0.73 have a stronger relationship with each other.

### 3-4- Investigation of second hypothesis

- There is a significant correlation between the corporate governance and return on non-common stock of companies listed on stock exchange.

Table 4: Testing the second hypothesis

Variables	Investors' ownership			Internal Auditor			Independent directors			Information transparency		
	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N
<b>Non-common return</b>	<b>0.59</b>	<b>0.037</b>	<b>117</b>	<b>0.44</b>	<b>0.04</b>	<b>116</b>	<b>0.48</b>	<b>0.046</b>	<b>117</b>	<b>0.22</b>	<b>0.566</b>	<b>117</b>

According to the results of table above, since the significance levels (Sig) of variables, the investors' ownership, internal auditors and independent directors, are less than error level, thus it can be claimed by confidence of 95% that there is a significant correlation between the investors' ownership with a positive coefficient of 0.59 (sig= 0.037), internal auditor with a positive coefficient of 0.44 (sig= 0.040) and independent directors with a positive coefficient of 0.48 (sig=0.046) with return on non-common stock

of companies listed on stock exchange. According to the obtained correlation coefficients, the independent directors and return on return on non-common stock with a positive coefficient of 0.59 have a stronger relationship with each other.

### 3-5 – Investigation of third hypothesis

- There is a significant correlation between the corporate governance and stock price of companies listed on stock exchange.

Table 5: Testing the third hypothesis

Variables	Investors' ownership			Internal Auditor			Independent directors			Information transparency		
	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)	N
<b>Stock price</b>	<b>0.79</b>	<b>0.025</b>	<b>117</b>	<b>0.59</b>	<b>0.039</b>	<b>116</b>	<b>0.23</b>	<b>0.56</b>	<b>117</b>	<b>0.1</b>	<b>0.734</b>	<b>117</b>

According to the results of table above, since the significance levels (Sig) of variables, the investors' ownership, internal auditors and independent directors, are less than error level, thus it can be claimed by confidence of 95% that there is a significant correlation between the investors' ownership with a positive coefficient of 0.79 (sig= 0.025), internal auditor with a positive coefficient of 0.59 (sig= 0.039) and independent directors with a positive coefficient of 0.23 (sig=0.56) with stock price of companies listed on stock exchange. According to the obtained correlation coefficients, the investors' ownership and stock price with a positive coefficient of 0.79 have a stronger relationship with each other.

### 3-6- Investigating the impact of control variables (firm size and systematic risk) on the relationship between corporate governance and stock price and return

Here, the correlation between the independent variables (four mechanisms of corporate governance system) and dependent variables (stock price and common and non-common return) is investigated through the control variables. To control the research variables, the firm size variable (the average firm asset is considered in this study) is classified into three large, medium and small categories, and the systematic risk variable into the three categories with high, medium and low risk and then we examine the independent and dependent variables for each category using Chi-square test to find whether the firm size or systematic risk have an impact on the correlation between the independent and dependent variables or not. Due to the long calculations, the final results are presented in the following table:

Table 6: The result of investigating the correlation between dependent and independent variables under both control variables

Dependent variable	Independent variable	Control variable	Result
Return on common stock	Percentage of institutional investment	Company size	Not significant
	Presence of internal auditor		Not significant
	Percentage of independent board members		Not significant
	Information Transparency		Not significant
	Percentage of institutional investment	Systemic risk	Significant
	Presence of internal auditor		Not significant
	Percentage of independent board members		Not significant
	Information Transparency		Not significant
Return on non-common stock	Percentage of institutional investment	Company size	Not significant
	Presence of internal auditor		Not significant
	Percentage of independent board members		Significant
	Information Transparency		Not significant
	Percentage of institutional investment	Systemic risk	Significant
	Presence of internal auditor		Not significant
	Percentage of independent board members		Not significant
	Information Transparency		Not significant
Stock Price	Percentage of institutional investment	Company size	Not significant
	Presence of internal auditor		Not significant
	Percentage of independent board members		Significant
	Information Transparency		Not significant
	Percentage of institutional investment	Systemic risk	Significant
	Presence of internal auditor		Not significant
	Percentage of independent board members		Not significant
	Information Transparency		Not significant

### 3-7- Estimating the econometric model of ordinary least squares (OLS) to measure the coefficients

In this study, the ordinary least squares (OLS) method is applied as an approach to estimate the main models of research. The reliability or durability of variables should be investigated before estimation of model and interpretation of coefficients.

#### The stationary tests (Stability or reliability) of variables in the model

In this section, the stability of research variables is investigated by Dickey-Fuller unit root test. If a variable is not stationary at the level of 5%, it should be investigated in first order difference state and if not

stationary in the first order difference, it should be examined in second order difference. If a variable is not stable at all three levels, it should be stabilized using the techniques or be removed from the model in order to prevent the negative impact on the estimation.

In this method, the ADF test statistic or calculated t of target delay variable is compared with MacKinnon critical values. If the obtained value of t is smaller than the critical values, we conclude that the target variable is stationary. The summary of Dickey-Fuller unit root test results for all variables of model is shown in the following table:

Table 7: Results of Dickey-Fuller unit root test for time series data of research variables

Variable	Dickey Fuller statistics	Maximum critical value of MacKinnon	Result	Degree
Percentage of institutional investors' ownership	-5.578244	-2.580281	Reliable	1 (0)
Presence of internal auditor	-15.02921	-2.580402	Reliable	1 (0)
percentage of independent directors	-9.484785	-2.580281	Reliable	1 (0)
Information transparency	-11.05778	-2.580163	Reliable	1 (0)
Return on common stock	-10.62326	-2.580163	Reliable	1 (0)
Return on non-common stock	-7.468500	-2.580163	Reliable	1 (0)
Stock Price	-10.90499	-2.580163	Reliable	1 (0)
Firm size	-2.445533	-2.580281	Unreliable	1 (1)
	-16.46203	-2.580281	Reliable	
Systemic risk	-5.576443	-2.580281	Reliable	1 (0)

The results of table above for the in reliability of variables, for instance, the return on common stock variable imply that the dependent variable or return on common stock (Y1) is reliable at the target level.

So the final result of reliability test indicates that the research variables become stationary at the level or the first order difference, this the target models can be fitted by determining the reliability degree of variables and the models will be faces with no problem.

However, given that all variables are not stationary at the level (some of the variables became stationary in the first order difference), if the estimation of model leads to a linear accumulated combination of zero degree from the variables of model, the regression will also be accumulated. Therefore, the reliability test will be done on the residuals of egression (cointegration test) after estimating the model in each state of reliability test.

### Estimation of model by OLS method and interpretation of coefficients

This section investigates the main research models including the dependent, independent and control variables. First, the explanatory variables according to the common return are fitted in the first model, and then the explanatory variables according to the non-common return in the second model.

#### Estimation of first model

The first model is the overall research model and estimated as follows: (The numbers in parentheses indicate the t-statistics of variables)

$$Y_1 = 1.19 + 0.62 x_1 + 0.51 x_2 + 0.73 x_3 + 0.13 x_4$$

(4.93)      (2.35)      (3.13)      (3.84)      (0.18)

$$R^2 = 0.80 \quad D.W = 1.75 \quad F\text{-statistic} = 49.41$$

Additional features of estimated model are presented in the following table:

Table 8: The complementary results of estimating the first model by software

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>X1 (Percentage of institutional investment)</b>	0.62	1.728139	2.35	0.02319
<b>X2 (Internal Auditor)</b>	0.51	17.62956	3.13	0.03155
<b>X3 (Percentage of independent members)</b>	0.73	2.075051	3.84	0.02953
<b>X4 (Information Transparency)</b>	0.13	0.176460	0.18	0.05927
<b>C</b>	1.19	134.3414	4.93	0.05015

The results of estimating the model indicate that:

1- t statistic and its probability (Prob) indicate the significance of all explanatory variables at the confidence level of 95% except for Information transparency as X4 variable.

2-  $R^2$  statistic indicates that 80 percent of variation in the dependent variable (return on common stock) can be explained by explanatory variables of model and this indicates the high explanation potential of model.

3- High F statistic of model (49.41) indicates the significance of whole regression.

4- Durbin-Watson statistic in the model equal to 1.758320 rejects the autocorrelation hypothesis between the components of model.

5- The coefficients of explanatory variables indicate that the research variables have significant positive correlation with the return on common stock in firms. In other words:

- With one unit increase in the institutional investment variable, the return on common stock is increased by 62%.

- With one unit increase in the internal auditor variable, the return on common stock is increased by 51%.

- With one unit increase in the percentage of independent board members, the return on common stock is increased by 73%.

- With one unit increase in the information transparency variable, the return on common stock is increased by 13%.

#### Estimation of second model

The second model is then estimated as follows: (Numbers in parentheses indicate t-statistics of variables)

$$Y_2 = 0.89 + 0.59 X_1 + 0.44 X_2 + 0.48 X_3 + 0.22 X_4$$

(3.55)      (3.83)      (2.48)      (2.10)      (1.05)

$$R^2 = 0.79 \quad D.W = 2.06 \quad F\text{-statistic} = 59.01$$

Additional features of estimated model are presented in the following table:

Table 9: The complementary results of estimating the second model by software

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>X1 (Percentage of institutional investment)</b>	0.62	1.728139	2.35	0.02319
<b>X2 (Internal Auditor)</b>	0.51	17.62956	3.13	0.03155
<b>X3 (Percentage of independent members)</b>	0.73	2.075051	3.84	0.02953
<b>X4 (Information Transparency)</b>	0.13	0.176460	0.18	0.05927
<b>C</b>	1.19	134.3414	4.93	0.05015

The results of estimating model 2 indicate that:

1- t statistic and its probability (Prob) indicate the significance of all explanatory variables at the confidence level of 95% except for Information transparency as X4 variable.

2-  $R^2$  statistic indicates that 79 percent of variation in the dependent variable (return on common stock) can be explained by explanatory variables of model and this indicates the high explanation potential of model.

3- High F statistic of model (59.01) indicates the significance of whole regression.

4- Durbin-Watson statistic in the model equal to 2.06 rejects the autocorrelation hypothesis between the components of model.

5- The coefficients of explanatory variables indicate that the research variables have significant positive correlation with the return on common stock in firms. In other words:

- With one unit increase in the institutional investment variable, the return on common stock is increased by 59%.

- With one unit increase in the internal auditor variable, the return on common stock is increased by 44%.

- With one unit increase in the percentage of independent board members, the return on common stock is increased by 48%.

- With one unit increase in the information transparency variable, the return on common stock is increased by 22%.

#### Estimation of third model

The third model is estimated as follows: (Numbers in parentheses indicate t-statistics of variables)

$$Y_3 = 2.06 + 1.02 x_1 + .30 x_2 + .43 x_3 + .06 x_4$$

$$(3.48) \quad (3.92) \quad (4.11) \quad (0.90) \quad (2.08)$$

$$R^2 = 0.84 \quad D.W = 1.91 \quad F\text{-statistic} = 27.01$$

Additional features of estimated model are presented in the following table:

Table 10: The complementary results of estimating the third model by software

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>X1 (Percentage of institutional investment)</b>	1.02121	1.728139	3.48	0.04319
<b>X2 (Internal Auditor)</b>	0.301204	17.62956	3.92	0.01155
<b>X3 (Percentage of independent members)</b>	0.431258	2.075051	4.11	0.05953
<b>X4 (Information Transparency)</b>	0.067852	0.176460	0.90	0.06927
<b>C</b>	2.06123	134.3414	2.08	0.0481

The results of estimating model indicate that:

1- t statistic and its probability (Prob) indicate the significance of explanatory variables, institutional investors and internal auditor, at the confidence level of 95%.

2-  $R^2$  statistic indicates that 84 percent of variation in the dependent variable (stock price) can be explained by explanatory variables of model and this indicates the high explanation potential of model.

3- High F statistic of model (27.01) indicates the significance of whole regression.

4- Durbin-Watson statistic in the model equal to 1.91 rejects the autocorrelation hypothesis between the components of model.

5- The coefficients of explanatory variables indicate that the research variables have significant positive correlation with the stock price index in firms. In other words:

- With one unit increase in the institutional investment variable, the stock price is increased by 102%.

- With one unit increase in the internal auditor variable, the stock price is increased by 30%.

- With one unit increase in the percentage of independent board members, the stock price is increased by 43%.

- With one unit increase in the information transparency variable, the stock price is increased by 6%.

### 3.8 - Validity Test of model:

After estimating the model, the validity of results and estimated coefficients above should be confirmed through regression and econometric tests.

#### 3.8.1- The true regression test

In this study, this test is investigated through "residual term reliability test". According to the Dickey-Fuller statistics of residual term (-8.348772) which is smaller than the critical value of MacKinnon (-2.582678), it can be concluded that the residual term or model error is reliable at all levels and the estimation is co-integrated and the regression is true.

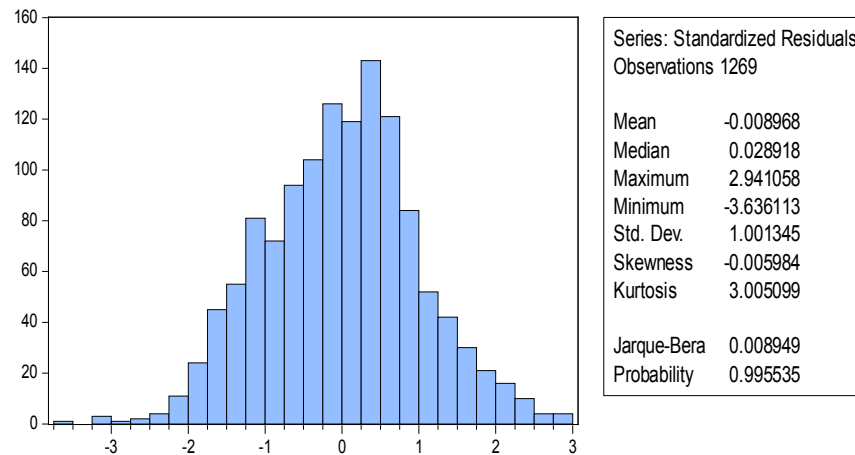


Figure 2: Results of estimating the normality test

#### 3.8.3- White test for identifying the Heteroskedasticity

According to the F statistics (0.855) and Obs\*R-squared (11.40) in this research and comparing them with values of table, it can be concluded that the null hypothesis based on the lack of heteroskedasticity is confirmed.

#### 3.8.4- Estimation of LM test for identifying the serial correlation of residual

In this research, the statistical values of F (2.2) and Obs\*R-squared (4.40) and their comparison with values of table indicate that H0 based on the lack of serial autocorrelation between the disturbance terms is confirmed and the function has no autocorrelation problem.

#### 3.8.4- Estimation of Ramsey test for detection of structural stability

The estimation results for testing this model suggest that according to the values of F statistic (0.04) and the Log likelihood ratio (6.09) and comparing them with the values in the table, the null hypothesis based on the structural stability of model cannot be rejected.

### 4 - Conclusion:

The obtained results indicate that there is a strong relationship between the obtained correlation

#### 3.8.2- Error Distribution Normality Test (Residuals):

Jarque-Bera test is one of the famous tests for evaluating data normality. For research model, the Jarque-Bera statistic is obtained equal to zero and the probable normality near 1, thus it can conclude that the null hypothesis based on the normality of residual terms is not rejected and the errors (residuals) have normal distribution.

coefficients for independent directors and return on common stock with positive coefficient of 0.73. Therefore, the independent directors have a greatest impact on return on common stock and the independent directors' decision making affects the reduction or increase of stock return.

Furthermore, According to the obtained correlation coefficients, there is a strong relationship between the investors' ownership and the return on non-common stock with positive coefficient of 0.59. The institutional investors' ownership affects the return on non-common stock. Moreover, the institutional investors' ownership with the positive coefficient of 0.79 has the greatest impact on stock price. It is noteworthy that the research findings are done according to the available data of companies listed on stock exchange; therefore, we should be careful to generalize the results to other companies.

According to the research findings, the following suggestions are offered:

1- The capital market authorities' attention and emphasis on the corporate transparency and the managers' performed task of accountability and providing the appropriate check list for evaluating the corporate transparency and accountability.



2- According to the importance of independent directors' roles in reinforcing the efficiency of board performance, it is essential to strengthen the independent directors' performance in board by offering the strategies.

3- In specified mechanisms of Corporate Governance Regulations, it is necessary to pay attention to the board members' other features including the members' experience, educational level, and professional familiarity with corporate business process in which they are the board members.

4- The presence of institutional investors as an external mechanism is among the main mechanisms of corporative governance. Not only this criterion directly affects the corporate performance, but also can indirectly improve it through utilizing other corporate governance mechanisms.

### References

1. Bauer Rob, Bart Frijns, Rogér Otten, Alireza Tourani-Rad, (2008), "The impact of corporate governance on corporate, performance: Evidence from Japan", *Pacific-Basin Finance Journal* 16 (2008) 236–251.
2. Davani, Gholam-Hosseini (2009), "What is the corporate governance?", *Modern Audit Website*.
3. Hassas-Yeganeh, Yahya (2005), The theoretical foundations of corporate governance, *Quarterly Journal of Accountant*, No. 168.
4. Hassas-Yeganeh, Yahya, (2006), "Corporate Governance in Iran", *Quarterly Journal of Auditor*, No. 32.
5. Hassas-Yeganeh, Yahya; Moradi, Mohammad; Eskandar, Hoda (2008), "The study of relationship between the institutional investors and corporate value", *Accounting and Auditing Studies*, Vol. 15, No. 52.
6. Joanna Dzia (2008), "Corporate governance and efficiency of a firm" Institute of Economics, University of Lodz, Poland.
7. Khurram Khan, Ali Raza Nemati, Moazzam Iftikhar (2011), "Impact of Corporate Governance on Firm Performance Evidence from the Tobacco Industry of Pakistan", *International Research Journal of Finance and Economics*, ISSN 1450-2887 Issue 61.
8. Lin Chen, Yue Ma, Dongwei Su (2010), "Corporate Governance and Firm Efficiency: Evidence from China's Publicly Listed Firms", Working paper, Chinese University of Hong Kong.
9. Mashayekh, Shahnaz; and Esmaili Maryam (2006), "Investigating the relationship between quality of profit and some aspects of governance principles in companies listed on Tehran Stock Exchange". *Accounting and Auditing Studies*, No. 45.
10. Namazi, Mohammad; and Kermani, Ehsan (2008). "The impact of capital structure on the performance of companies listed on Tehran Stock Exchange", *Accounting and Auditing studies*, No. 53, pp. 83-100.
11. Pourheidari, Omid; Bayat, Ali (2009), "Exploring the usefulness of basic and market-based variables in determining the stock returns", *Shahid Bahonar University of Kerman*.

1/21/2019