Investigation the Relationship Between Institutional Investors and Corporate Performance: Evidence from Tehran Stock Exchange

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Abstract: One of the main factors to improve economic performance is corporate governance system which includes a set of relations among company management, board, shareholders and other interested parties. Institutional investors are one of the effective factors in corporate governance system. The main objective of this study is investigation the effect of institutional investors on the some performance indicator of companies listed in Tehran Stock Exchange. For this purpose, a sample size of 540 firm-years were studied during the period 2006 to 2010. In this study the variables of returns on sales (ROS), profit growth rate (GP) and cash flows (CF) is used to measure corporate performance and institutional investors is indicator of corporate governance. Regression model is used to test the Relationship Between them. In this line, we firstly performed default tests for using regression models include heteroscedasticity investigation test, autocorrelation investigation, significance tests of fixed effects. After this, we use OLS and GLS techniques for regressing model. Estimations of studied models have shown that there is no significant relationship between the percentage of institutional shareholders and return on sales, profit growth rate and cash flows.

Key words: Corporate governance • Institutional investors • Corporate performance

INTRODUCTION

Nowadays, economic growth and development, increasing corporations and separation of management from ownership has made agency issues to one of the important concerns for investors. Agency issues stems from the fact that investors usually are not willing or able for conduct corporate affairs. Therefore, these responsibilities are delegated to managers. If both managers and investors looking to maximize their personal interests and if monitoring the agent performance is required to spending expense, these actions implicitly contain this message that agent always may not intend to keep the owner's interests and maximize his wealth [1].

Proper role of shareholders in any economy is a controversial subject. Meanwhile, institutional investors are one of the major active groups in the market that through performing major transactions can have dramatic effects on moving towards market and companies efficiency. Intention of institutional investors is a person or institution that sale and purchases the major volume of companies stock. Such as state and private banks, pension funds, insurance companies, social organizations, funds, investment companies and foundations and institutions. According to article 27 of clause1 of the Security Market of the Islamic Republic of Iran, an institutional investor include: (1) banks and insurance firms, (2) holding and investment companies, pension funds, Financing companies and investment funds listed in Securities and Exchange Organization, (3) any natural or legal person that purchases more than 5 percent or more than 5 billion Riyals of the nominal value of issuing securities of publisher, (4) state organizations or institutions, (5) state companies and (6) board members and publishers managers or someone who have the same functionality.

In recent decades, stocks under the ownership of institutional investors have increased dramatically. Hence, institutional investors are the largest shareholders of public corporations. Organizational coherent structure
and their ownership complex network show more the distinction between these groups. They behalf of wide range of owners and with reliance on the high analysis power adopt more reasonable and informed decisions (compared to uninformed investors) and can accelerate the process of improving market efficiency and also improve resource allocation performance by the market. On the other hand, with monitoring on the performance of subset companies and participating in corporate major policies, these investors, will bring improving efficiency and promote the public welfare. In such environment, attempts and scrambles of companies to attract investment and obtaining more resources lead to improve efficiency and increase returns on investments and as a result, investors and trying people will achieve to appropriate and worthy return [2].

Due to the domination and influence of institutional investors in the guidance of companies, they quickly acquire confidential information and by transacting based on this information can be efficient on the realization of one of the necessary conditions for fair and accurate assessment of the securities by the market (i.e. being complete). Therefore, they prevent from formation of imperfect markets in which jobber and opportunistic people with wastage of others rights and transaction based on the confidential information achieve to high revenue and trying people do not achieve to their inalienable rights. Moreover, these institutions relying on their influence in the market are able to monitor on the providing information from companies, observing of professional ethics, increasing accuracy and precise of provided information. Finally, these investors with trading on their information help to fair formation of supply and demand in market and quick and accurate reflect of information (without bias) in the prices. In such conditions, opportunity of obtaining arbitrage profit quickly eliminates and price transparency will be achieved and can be ensured that the price reflects the quality of performance [3].

If subsidiary shareholders are not satisfied from the performance of the company's board, they can: sell their stocks, or has declared their dissatisfaction and held their stocks and in contrast, because institutional shareholders have more percentage of stock, often the ability of selling their stocks is less, so they must monitor the performance of managers, in contrast to the high cost of monitoring, it is not possible for subsidiary shareholders.

Based on above, present study seek to answer this question: "Do institutional investors affect on the performance of companies listed in Tehran Stock Exchange?". In this study, we used variables such as: return on sale ratio, profit growth rate and cash flows as criteria for evaluating company performance. In an experimental manner, this study shows to managers, investors and other decision makers that different ownership structure of exchange companies will have what effect on their performance. In this study, first theoretical and experimental bases of research are described, then the theories, methods of analysis, variables and research models are expressed and finally research results will be provided.

Theoretical and Experimental Bases of Research

Theoretical Literature: One of the control mechanisms affecting corporate governance is the emergence of institutional shareholders in the arrangement of company shareholders. Institutional shareholders have potential power affecting managers’ activities directly through the ownership and indirectly through their stock exchange. Indirect influence of institutional shareholders can be more strong. For example, institutional shareholders may avoid investing in a particular company and from this way cause to increase company capital—because attracting capital for these companies will be harder and then more expensive. From theoretical view of Shleifer and Vishny [4], institutional investors have powerful place in corporate governance that can be effectively monitored on company management. In the literature of corporate governance, remember from ownership interest as an important mechanism that controls agency problems and improve the protection of investors interests. However, such a focus can also have negative effects, such as access to confidential information which creates the asymmetry of information between them and smaller shareholders.

Long-term institutional investors can improve firm performance in three ways: First, because of their close relationship with capital market and activity monitoring they can reduce agency issues and information asymmetry. Second, they can adjust the problem of management myopia, so that managers can invest in more long-term profitable projects. Third, through increasing the degree of motivation, managers’ rewards they better aligned their interests with shareholders and thus improve firm performance [5].

The Empirical Literature of Research: Perhaps Berle and Means [6] were the first people in 1932 that deal with this issue and claimed that there is a negative relationship between decentralization and extent of ownership with
corporate performance. They believe that with more number of shareholders and lower ownership percentage of each group, the weaker performance of company. This theory was later challenged by researchers.

Demsetz and Lehn [7], Shleifer and Vishny [4] and Hermalin and Weisbach [8] investigated the effect of ownership structure on corporate performance. Their research results indicate that there is a positive and important relationship between ownership structure and corporate performance. Smith [9] investigated whether institutional shareholders will lead to greater focus on corporate performance and concluded that a close monitoring by institutional investors can lead to greater focus on corporate performance and less focus on the opportunistic and profitable behaviors. 

Harasheh and Nijim [15] investigated the effect of Demsetz and Lehn [7], Shleifer and Vishny [4] and institutional investors on the performance of companies. Hermalin and Weisbach [8] investigated the effect of listed in the Palestine Stock Exchange during the period 2006 to 2008. In this study, dependent variable is Tobin's Q ratio or the market value. Research results show that there is a significant relationship between institutional investors and profit growth rate of companies.

Research Design

Statistical Population and Sample: The statistical population of this research is all companies listed in Tehran Stock Exchange during the five-year period from 2006 to 2010, investigated companies includes all companies that have institutional shareholders in their capital structure and have the following conditions:

- In order to be homogeneous of statistical sample in studied years, they were listed in Tehran Stock Exchange before 2006.
- They should not be banks or financial organizations (investment companies, financial intermediation, holding and leasing) that have different financial disclosures and corporate governance principles structure.
- In terms of comparability, their financial period lead to December 31.
- Their financial period has not changed during the studied fiscal year.
- Their required data are available.

Research Hypotheses: In order to evaluate the impact of institutional investors on corporate performance, the following hypotheses are composed for the test:

H₁: There is a significant relationship between percentage of institutional investors and return on sale of companies.
H₂: There is a significant relationship between percentage of institutional investors and profit growth rate of companies.
H₃: There is a significant relationship between percentage of institutional investors and cash flows of companies.
Considering the above circumstances, the size of selected sample was 108 firms or 540 firm-year. Data needed to measure the variables has been extracted from the Tehran Stock Exchange website (Note 1) and CDs of financial data of listed companies that published by Tehran Stock Exchange.

Methods of Data Analysis and Hypotheses Testing:
The present study is descriptive-correlation in terms of the nature and method and is applied in terms of purpose. Statistical models used in this study are the multiple regression models. In this study are used panel data to test hypotheses. In the panel data method, time series and cross sectional data are combined with each other and are used for items that issues cannot investigated in time series or cross sectional form or when the number of data is low. Furthermore combined data are used for increasing the number of observations, increasing degree of freedom, reduce heteroscedasticity and dynamic study of changes [17].

In the combined data method for selecting between compilation and panel data, we used Limer's F test. If panel method select, Hausman test are performed to select between fixed effects and random effects methods. If Limer's F test results verify the use of compilation data method, Hausman test is not required. To investigation of heteroscedasticity we should use ARCH LM test.

In order to study the independence of errors in regression models of present research is used Durbin- Watson (DW) test. If Durbin-Watson (DW) statistic is between 1.5 to 2.5, the autocorrelation between the errors can be rejected [18] and independence of errors can be concluded. To explain the explanatory power of independent variables is used adjusted $R^2$, to evaluate significance of variables is used $t$ statistic and to evaluate overall adequacy of model is used Fisher's F statistic. Also, the statistical analysis is done through software EVIEW.

Operational Definition of Research Variables: Research variables include the dependent, control and independent variables.

Dependent Variables
Profits Growth Rate of Companies: In this study, the profits growth rate of companies is obtained from dividing the differences between net profit of current year and net profit of last year by company net profit of last year.

\[
GP = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}}
\]

where:

\[
P_{i,t} = \text{Net profit of company } i \text{ in year } t
\]

\[
P_{i,t-1} = \text{Net profit of company } i \text{ in year } t-1
\]

Cash Flow Ratio: Cash flow is important because it allows managers to search opportunities that enhance stock value of company. Without cash, new products development, conducting business acquisitions, cash dividends paid to shareholders and reduce debt is not possible. On the other hand, cash should be kept at a optimum level that is balanced between cash maintenance cost and insufficient cash cost which this ratio is calculated as follows:

\[
\text{Cash Flow} = \frac{\text{Cash flow(Difference of first and last cash)}}{\text{book value of total assets}}
\]

Return on Sale Rate: In this research, return on sale rate of companies was calculated from proportion of net profit to net sale in each company:

\[
\text{ROS} = \frac{\text{net profit}}{\text{net sale}}
\]

Independent and Control Variables
Institutional Investors: Institutional investors are considered as the unique independent variable in this study. According to Bushee [19] definition, institutional investors are large investors such as banks; insurance companies, investment companies and etc that huge size of their operations are trading their shares. Furthermore, in accordance with definition of article 27 of clause1 of the Securities Market of the Islamic Republic of Iran, any real or legal person that purchase more than 5 percent or more than 5 billion Riyals of the nominal value of issued securities of publisher also should be counted as institutional shareholders. In the present study, the percentage of institutional shareholders in each company obtains from dividing the number of institutional investors’ shares by total number of common stock at the beginning of the period.

Also in this study have been used control variables to companies’ uniformity in terms of other affecting factors. These factors include financial leverage, market risk, size and age of company.

Financial Leverage: Is calculated as follows:

\[
\text{Leverage} = \frac{\text{book value of Long – term debt}}{\text{book value of assets}}
\]

Market Risk of Company: Market risk is calculated using standard deviation of stock returns (stock returns vibrations). A daily stock return vibration is equal to the standard deviation of daily returns of company's stock (daily price changes) during the studied period. The following equation is used to calculate daily returns:

\[
TD_i^t = \frac{P_c}{P_B} - 1
\]

\(TD_i^t\): Daily returns
\(P_c\): The difference in stock price at the beginning and end of the day
\(P_B\): Price of stock at the beginning of the day

Company Size: To calculate the company size we can use book value of total assets or the market value of equity. In this study, company size is used by the natural logarithm of book value of total assets of companies at end of the year.

\[
\text{Size} = \ln(\text{book value of total assets})
\]

Company Age: In the present study, company age obtained from natural logarithm of differences between arrival year of company into exchange and studied years.

\[
\text{Age} = \ln(\text{arrival year of company into exchange-studied years})
\]

Models Used to Test the Research Hypotheses:
To investigate the relationship between institutional investors and corporate performance, models (1) to (3) is estimated:

In order to test the first hypothesis is used the model (1):

\[
\text{GR}_{i,t} = \beta_0 + \beta_1 \text{Share}_{i,t} + \beta_2 \text{Lev}_{i,t} + \beta_3 \text{Mkt}_{i,t} + \beta_4 \text{Size}_{i,t} + \beta_5 \text{Age}_{i,t} + \epsilon_{it}
\]  

(2)

In order to test the third hypothesis is used the model (3):

\[
\text{CF}_{i,t} = \beta_0 + \beta_1 \text{Share}_{i,t} + \beta_2 \text{Lev}_{i,t} + \beta_3 \text{Mkt}_{i,t} + \beta_4 \text{Size}_{i,t} + \beta_5 \text{Age}_{i,t} + \epsilon_{it}
\]

(3)

In these models:

\(\text{ROS}_{i,t}\) = Rate of return on sales of firm i in year t
\(\text{GP}_{i,t}\) = Profits growth rate of firm i in year t
\(\text{CF}_{i,t}\) = The cash flow ratio of firm i in year t
\(\text{Share}_{i,t}\) = Percentage of institutional shareholders of firm i in year t
\(\text{Lev}_{i,t}\) = Financial leverage of firm i in year t
\(\text{Mkt}_{i,t}\) = Market risk of firm i in year t
\(\text{Size}_{i,t}\) = Firm size of firm i in year t
\(\text{Age}_{i,t}\) = Firm age of firm i in year t
\(\epsilon\) = Disruption component (residual) of model

Research Findings

Data Analysis

Limer’s F test: As previously mentioned, panel data techniques and Limer’s F test used to detect compilation. In this test, the hypothesis \(H_0\) is uniformity of intercept (compilation data method) that is placed in the opposite of hypothesis \(H_1\) heterogeneity of intercept (panel data method). The results of Limer’s F test is reflected in Table (1):

The results from Limer’s F test in Table 1 confirm the hypothesis H1 for all models. As a result, panel data method is used for fitting.

Hausman Test: Given that, the panel data method is used to model fitting, therefore one method is selected between fixed effects and random effects methods. For this purpose in panel data are used Hausman test. According to this test, rejection of hypothesis \(H_0\) indicates use of fixed effects method and acceptance of hypothesis \(H_0\) indicates use of random effects method. Hausman test results which are presented in

Table 1: Results of Limer's F test

<table>
<thead>
<tr>
<th>Research Models</th>
<th>F statistic</th>
<th>Degree of freedom</th>
<th>p-value</th>
<th>Test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model (1)</td>
<td>4.087494</td>
<td>107.427</td>
<td>0.0000</td>
<td>(H_1) is accepted</td>
</tr>
<tr>
<td>Model (2)</td>
<td>1.634315</td>
<td>107.427</td>
<td>0.0003</td>
<td>(H_1) is accepted</td>
</tr>
<tr>
<td>Model (3)</td>
<td>1.493173</td>
<td>107.427</td>
<td>0.0030</td>
<td>(H_1) is accepted</td>
</tr>
</tbody>
</table>
Table 2: Results of the Hausman test

<table>
<thead>
<tr>
<th>Research Models</th>
<th>Statistic</th>
<th>Degree of freedom</th>
<th>p-value</th>
<th>Test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model (1)</td>
<td>44.773603</td>
<td>5</td>
<td>0.0000</td>
<td>$H_0$ can be rejected</td>
</tr>
<tr>
<td>Model (2)</td>
<td>17.379215</td>
<td>5</td>
<td>0.0038</td>
<td>$H_0$ can be rejected</td>
</tr>
<tr>
<td>Model (3)</td>
<td>62.455525</td>
<td>5</td>
<td>0.0000</td>
<td>$H_0$ can be rejected</td>
</tr>
</tbody>
</table>

Table 3: LM Arch test results

<table>
<thead>
<tr>
<th>Research Models</th>
<th>Statistic</th>
<th>p-value</th>
<th>Test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model (1)</td>
<td>0.093728</td>
<td>0.7596</td>
<td>OLS method</td>
</tr>
<tr>
<td>Model (2)</td>
<td>2.877295</td>
<td>0.0404</td>
<td>GLS method</td>
</tr>
<tr>
<td>Model (3)</td>
<td>0.006867</td>
<td>0.9340</td>
<td>OLS method</td>
</tr>
</tbody>
</table>

Table (2) indicate rejection of hypothesis $H_0$ and selection of fixed effects method in all three models for estimation.

**Heteroscedasticity Test**: For estimating a linear regression model is usually used ordinary least squares (OLS) method. Statistics of this method are the best unbiased linear estimator. But when there is a heteroscedasticity between the residual components of model, generalized least squares (GLS) method should be used. Such test for heteroscedasticity is Arch LM test. The test results in Table (3) are given for all three models.

According to Table (3), at 5% error level, p-value of the first and third models are not significant, so homogeneity hypothesis of variance will confirm and OLS model will be efficient for regression test. But in the second model, the test statistic is significant at 5% level, so homogeneity of variance will reject and heteroscedasticity of disturbing item is accepted. This issue is caused from violation of hypothesis $(U_i) = \delta I$. Such a problem in regression cause that the results of OLS is not more efficient. To resolve this problem, generalized least squares (GLS) method will be used.

**The Results from Hypotheses Testing**

**Results from the First Hypothesis Test**: The first hypothesis is proposed as follows:

$$H_0: \text{There is no significant relationship between percentage of institutional investors and return on sale of companies.}$$

$$H_1: \text{There is significant relationship between percentage of institutional investors and return on sale of companies.}$$

According to the results in Table (4) from estimation of model (1), the coefficient of percentage of institutional investors’ variable (Share) is equal to -0.0021 and its P-value is equal to 0.1007 and more than 5% error level. Therefore, we can be stated that there is no statistically significant relationship the percentage of institutional investors and return on sale of companies and the mentioned hypothesis can be rejected. Between the four control variables of research (financial leverage, market risk, size and age of company) only firm size variable (Size) with a return on sales (ROS) has statistically negative and significant relationship at 99% confidence level.

As it is observed in Table (4), the F statistics is equal to 4.3013 and significance level is 0.0000 which shows a linear regression model is statistically significant at 99% confidence level. Also, the adjusted determination coefficient (Adjusted $R^2$) of model (1) is equal to 0.4069 and it is indicated that about 41% of changes in dependent variable is explained by variables of regression model.

The Durbin-Watson statistic is equal to 2.4905 that are between 1.5 and 2.5. So, it can be stated that there is no autocorrelation between observations in model (1).

**Results from the Second Hypothesis Test**: The second hypothesis is stated as follows:

$$H_0: \text{There is no significant relationship between percentage of institutional investors and profit growth rate of companies.}$$

$$H_1: \text{There is significant relationship between percentage of institutional investors and profit growth rate of companies.}$$

The results of model (2) estimation in Table 5 show that the P-value of institutional investors (Share) is equal to 0.5941 and is greater than 5% error level. Therefore, it
can be noted that there is no significant relationship between percentage of institutional investors and profit growth rate of companies. And the second research hypothesis is not confirmed. Among the control variables, only firm age variable (Age) has negative and significant relationship with profit growth rate of companies (GP). And it is indicated that whatever the number of membership years of companies in Tehran Stock Exchange is greater, their profit growth rate is lower.

As it is evident from the results of Table (5), the F statistics and significance levels of model are 1.7627 and 0.0000 respectively and suggest that linear regression model is statistically significant at 99% confidence level. Also, the adjusted determination coefficient (Adjusted R²) of model (2) is equal to 0.1368 and it is indicated that explanatory variables of model approximately described 14% of changes in dependent variables.

About autocorrelated test through Durbin-Watson can be said that because the test statistic is equal to 2.0523 this value is between 1.5 and 2.5, we can conclude that there is no autocorrelated between variables.

Results from the Third Hypothesis Test: The third hypothesis is stated as follows:

\[ H_0: \text{There is no significant relationship between percentage of institutional investors and cash flows of companies.} \]

\[ H_1: \text{There is significant relationship between percentage of institutional investors and cash flows of companies.} \]

Table 6 shows that the coefficient of the percentage of institutional investors’ variable (Share) is equal to 0.0133 and its P-value is equal to 0.1495 and it is more than 5% error level. In fact, it can be stated that there is no statistically significant relationship between the percentage of institutional investors and cash flows of companies and the third hypothesis of research can be rejected. Among the control variables, only the relationship between firm size variable (Size) and cash flows (CF) is positive and significant at 99% confidence level.

As it is evident from the results of Table (6), the F statistic for the model (3) is equal to 1.5388 and its p-value is equal to 0.0013 which suggests that the model estimation to hypothesis test is significant in general. Also, the adjusted determination coefficient (Adjusted R²) is equal to 0.1007. This value represents that explanatory variables included in the model have been able to explain approximately 10% changes in cash flows of companies.

In addition, the value of Durbin-Watson test is equal to 2.0629 which indicating no autocorrelation of errors.

CONCLUSION

Present study has investigated the effect of institutional investors on corporate performance in a sample with size of 540 firm-years among companies listed in the Tehran Stock Exchange during years 2006 to 2010. In this study, percentage of institutional shareholders variable (Share) is used as independent variable and financial leverage (Lev), market risk (Mktr), firm Size (Size) and firm age (Age) are used as control variables. Also, corporate performance indicators such as rate of return on sales (ROS), profit growth rate (GP) and cash flow ratio (CF) are used as dependent variables. Results indicate that statistically there is no significant relationship between institutional investors and Iranian companies’ performance indicators (ROS, GP and CF).

Comparing the results of this study with others in different countries show that we cannot achieve to the same and generalized results about relationship between...
ownership structure and return or firm value, but this effect usually related to the company special conditions such as macro-economic, cultural and social conditions that the company is trading in them. In other words, there are characteristics and conditions in each country that can determine positive or negative effects of ownership structure on corporate performance. For example, in Iran, if there is a state body with only one share in the management board, it can conduct the company usually toward government interests, not firm objectives even in the private firm. But the story in more country is completely diverse.

Sometimes institutional investors may unite with managers that in this condition the interests of secondary shareholders may disregard because of interests’ asymmetry with those two groups. In such situation, the expected beneficial effects of effective surveillance actions reduce by major shareholders on directors, in this case observed a conflict of interest between major shareholders and other owners that due to the influence power of major shareholders, this conflict will lead ultimately to detriment for other shareholders.

Management must act toward interests of all shareholders. Ownership structure can force management to move in this line. Therefore, it comes to mind that presence of institutional shareholders in the company's ownership structure will change corporate performance toward increasing. But in some cases, with intervention in the operational activities of companies, institutional investors are trying to transfer profits to themselves- not to firm. Therefore, they may reduce the company's performance.

REFERENCES
