Study of the relationship between major shareholders and earnings management of listed companies in Tehran Stock Exchange

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Abstract

One of the corporate governance roles is to reduce conflicts of interest between shareholders and managers. The role of corporate governance is useful when managers are deviating from shareholders. The interest of shareholders and earning management is one of the deviation samples through total accruals. Major shareholders are as one of the external variables of corporate governance that they mostly own most important part of the company's shares. They have opportunities and the required ability to monitor managers and they can affect managers' decisions by this way. Therefore, it is possible to reduce the occurrence of earnings management. Major investors may be improve the investors' perceive of the corporate credibility performance which they will be assessed by the gain in terms of earnings management. The main objective of this study was to investigate the relationship between earnings management and major shareholders in listed companies in Tehran Stock Exchange. Data are collected using population consisted of 126 companies listed in Tehran Stock Exchange, which are came to55 companies by sampling, which all data analyze by data integrating regression of ordinary squares methods during the period 2004-2009. Research includes a hypothesis that it was considered the relationship between percentages of major shareholders as independent variable and earning management as dependent variable. The results at 5% error level stated the hypothesis configuration and it showed that there is significant relationship between major shareholders and earning managements and this causes its reduction.

Keywords: Major shareholders, corporate governance, Earnings management, Total accruals.
Introduction:

Shareholders’ structures of different companies are vary. Part of the company’s property is held by petty shareholders and natural persons; this group is mainly relied on available information to the public such as published financial statements for monitoring the managers' performance. While another part of the property in the hands of major professional investors, who are unlike the first group shareholders, the valuable information about the future prospects and business strategy and etc. of the company are available to them through direct communication with company managers (Nourvash & Ebrahimi, 2005). Haley and Allen have provided the following definition of earnings management. Earnings management occurs when the director uses his own judgment for financial reporting, Scott points out earnings management as the company's accounting policy choice to achieve some specific goals director. Fern and et.al introduce earnings management to achieve some of the prejudices of the “expected earning” (as predicted by analysts, management and reducing the dispersion of earnings) as earnings management. Earnings management deliberates interference with the external financial reporting process to make a profit (Shibe, 1989). Major impact on management decisions for the benefit of investors such as earnings management is more important. Most of before studies about earning management ignored generally the impact of major shareholders as one of the external variables of corporate governance that it may be limited the managers’ abilities to earning management, so this issue is the motivation for this study. Therefore, it seems that there is relationship between the major shareholders and earning management and in this study tried to investigate empirically the relationship between earnings management and major shareholders of listed companies in Tehran Stock Exchange.

Literature:

Theoretical Literature:

Earnings Management: Earnings management refers to a conscious behavior on the part of the company's management mainly done to reduce the oscillations periodic benefit. In general, researchers believe that investors prefer to invest in companies that it has a uniform and stable profitability process and companies that have reported volatile earnings and they have higher risk than other companies. Therefore, the reported earnings are considered as a measure of financial decision-making, with special credit and financial analyst earnings as a major factor in their evaluations and judgments. For this reason, managers to show desirable image of the company and risk mitigation investments have strong incentives to manage earnings. Stakeholders, particularly shareholders that they have a higher percentage shares (Major shareholders) try to gain more efficiency, control and monitor the activities of the company's management. Major shareholders: Major shareholders are one of the important mechanisms of corporate governance. They potentially have an effective direct or indirect influence on the activities of the managers. They have influence through their ownership and exercised stock. Major shareholders can be aligned the interests of management to the interests of shareholders and they somewhat can be reduced agency problems and avoided own earnings management’s loss and other petty stakeholders by management. Many people are discussed the issues leading to increased
shareholder limit the agency's problems and there is enough incentive to monitor managers. Experimental evidences show that the supervisory role of major stakeholders improves the reporting process and will often lead to less conflict between managers and shareholders.

**Literature:**

Many researchers confirmed that major shareholders always involve monitoring and controlling activities and they potentially limit the problems related to representation. Shifer and et al (1987), Admati and et al (1993) and mowg (1998) believe that all shareholders are benefited the supervisory role of a major shareholder, because they do not incur any costs for such monitoring, in addition, major shareholders have suitable incentives for monitoring. Decho et al (1996) concluded that the presence of major shareholders will be provided very effective supervision. As a result, managers will not be able to consider the earnings smoothing through ignoring accounting standards.

Cheng and et al (2008) found that the presence of major and active shareholders inversely correlated with income (earnings) smoothing. Beker and et al (1998) in their investigation concluded that the company's managers have less tendency to open up their last year profits when major shareholder are presented (at least 5% of the stock).

Dichow et al (1996) concluded in the study that companies who are manipulating earnings are less interested in having a major shareholder. Eli and et al (2000) state that the major shareholders, to do certain things, made a pressure on management. So managers in companies with major shareholders have high incentive to manage the earning, especially in companies that are faced with reduced efficiency.

Mac Echren et al (1975), Holdernes et al (998) concluded to above results in the study. Ama, Dempsi et al (1993) concluded in the study that companies which are managed by the owners, in comparison to firms which are managed by non-owners are less tendency to earning management. They also concluded that a high percentage of managers who own shares of the company, they had been done less earnings smoothing, but there are no have significant effect on the income smoothing process according to major shareholders involvement.

**Research hypothesis:**

There is a negative relationship between major shareholders’ ownership and earnings management.

**Research methodology:**

Given that the purpose of this study was to investigate the relationship between earnings management and supervision of major shareholders, the research is an applied and a semi-empirical method. Panel data econometrics research method used to estimate the regression model and hypotheses test. Library method and then use the Exchange site software and data processing initial gimmick for companies to calculate the variables directly from the website of the Tehran Stock Exchange and
the company's financial statements were collected and used to develop a theoretical investigation and evaluating the research hypotheses. Therefore, in the present study the method of data collection was field survey. The statistical study population is included 126 companies listed in Tehran Stock Exchange that are based on the research limitations and a sample including 55 companies was selected among different industries. No. (3) Equation was used to measure the dependent variables, i.e., earnings management and the percentage of shares owned by major shareholders used to measure research independent variable. A multivariate regression model between the dependent and independent variables and combined data analysis method is used to test the research hypotheses.

**Research Keywords definition:**

**Major stakeholders:** shareholders in large corporations are divided into two classes: major shareholders and petty shareholders, in the literature and various investigations those shareholders who own more than 5% of the shares of the company, they are the major shareholders.

**Earnings management:** The process of identifying the manipulation of reported earnings to the reported earnings stream to little change, however, the reported income does not increase in the long term. Earnings management is a clear objective and the creation of sustainable growth in profits (Tirole, 1995).

**Total accruals:** this is a result of the difference between net income before non-regular and non-continues accruals, and operational cash flows.

**Results Analyze:**

Research data are collected directly from the financial statements of listed companies in Tehran Stock Exchange and by organization’s website. The number of companies on the basis of population limitations expressed in the third chapter was included 126 companies. The research statistical sample also includes 55 companies. E-views and Excel software are used to calculate the dependent and independent variables and hypotheses test. Earnings management is the dependent variable in this study, and major shareholders are the independent variable which is calculated by the amount of shares belongs to major shareholders to the company's total shares. Regression test have been made in the form of a hypothesis to examine the relationship between dependent and independent variables. In this chapter, the relationship between the independent and dependent variables are analyzed using mixed data and various tests which are presented in the following.

**Variables Calculation and Data Preparation:**

Independent variable in the research i.e. supervision imposed by the major shareholders associated to the percentage of shares owned by major shareholders was calculated for 55 sample companies During 2004 to 2009 and plotted and categorized in Excel. The dependent variable in the research, i.e. earnings management associated to the following equation calculated for 55 sample companies' during 2004 to 2009.

\[
\text{TACCR} = \text{EBXT} - \text{CFO}
\]

Eq.
EBXT is defined as net profit before unexpected and infrequent accruals and CFO as Cash flow from operations.

After collecting the data, first the numbers of unused data were removed. Removing the data is performed to prevent distortion of the results of research. The column chart is mapped for each variable in the Excel software and the data which are significantly different from other data identify and remove. Then, the final data for research tests were transferred to E-views software.

**Descriptive statistics:**

Before analysis of statistical data, it is necessary described these data to better understand and learn more about the research population and variables. Describing data is sometimes a step towards recognition their pattern and the basis for explaining the relationships between variables (Khorshidi & Qoreyshi1 2002). Therefore, before the research hypotheses test, the descriptive statistics of variables used in the research are reviewed in the industry level which presented in table (1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average</th>
<th>middle</th>
<th>Standard Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Number of observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major shareholders supervision</td>
<td>46%</td>
<td>52%</td>
<td>21%</td>
<td>94%</td>
<td>11%</td>
<td>330</td>
</tr>
<tr>
<td>Earnings management</td>
<td>0.0614</td>
<td>0.0224</td>
<td>0.1304</td>
<td>0.5977</td>
<td>-0.3290</td>
<td>330</td>
</tr>
<tr>
<td>firm Size</td>
<td>5.5058</td>
<td>5.44845</td>
<td>0.4345</td>
<td>6.9434</td>
<td>4.4506</td>
<td>330</td>
</tr>
<tr>
<td>firm life</td>
<td>15.5139</td>
<td>13.0000</td>
<td>10.1420</td>
<td>43.000</td>
<td>6.0000</td>
<td>330</td>
</tr>
<tr>
<td>Operational cash flow</td>
<td>0.1330</td>
<td>0.1215</td>
<td>0.1316</td>
<td>0.6296</td>
<td>-0.2765</td>
<td>330</td>
</tr>
</tbody>
</table>

As can be seen in Table (1), the average of major shareholders supervision is 46%. This amount represents that the property of studied companies belong to major shareholders has been approximately 46% during 2004 to 2008. Meanwhile, according to the above table the average earnings management is 0.0614 and the minimum and maximum are -0.3290 and 0.5977, respectively, which indicates that the sample has a suitable variety for hypotheses testing.

After statistical describing of data, a correlation between variables is examined. Pearson correlation coefficient was used to determine the relationship between variables. Correlation study is a statistics tool by which we can measure the degree to which a variable linear related to other variable. Correlation relationship between variables is presented Table (2).

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http://www.ijhcs.com/index.php/ijhcs/index
Table 2: Correlation coefficients between variables

<table>
<thead>
<tr>
<th>Correlation coefficient</th>
<th>OBM</th>
<th>EM</th>
<th>FS</th>
<th>FG</th>
<th>CFO</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBH</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>0.0121</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.718</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS</td>
<td>-0.0850</td>
<td>-0.017</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.012</td>
<td>0.740</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FG</td>
<td>-0.0860</td>
<td>-0.0142</td>
<td>0.0570</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.014</td>
<td>0.720</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFO</td>
<td>-0.0008</td>
<td>-0.0190</td>
<td>0.0046</td>
<td>0.0068</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>0.960</td>
<td>0.605</td>
<td>0.014</td>
<td>0.674</td>
<td></td>
</tr>
</tbody>
</table>

The correlation coefficient between the variables used in the model should not be high. The correlation between the independent variables in the model is caused to corrupt the regression results. As seen in this table, the correlation between variables is indicated the lack of important correlation between these variables.

Hypothesis test results:

Hypothesis test results using cross-sectional data (yearly)
The following model used to test the hypothesis for each cross-sectional study the years 2004 to 2009, separately:

$$EM_{i,t} = \alpha_0 + \alpha_1 OBH + \alpha_2 FS_{i,t} + \alpha_3 FG_{i,t} + \alpha_4 CFO_{i,t} + \epsilon_{i,t}$$

In the model, OBH is presented to major shareholders percentage (independent variable) and EM to earnings management (dependent variable). FS, FG and CFO are represented the firm size, firm growth and operational cash flow (control variables), respectively.

The hypothesis results for each year 2004 to 2009 (yearly method) are presented in the table (3).

Table (3): Test results of research hypothesis by yearly method (cross-sectional)

<table>
<thead>
<tr>
<th>Definition</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-statistics (p-values)</td>
<td>11.01 (0.000)</td>
<td>12.31 (0.084)</td>
<td>14.04 (0.000)</td>
<td>22.31 (0.001)</td>
<td>10.10 (0.011)</td>
<td>7.97 (0.041)</td>
</tr>
<tr>
<td>Coefficient</td>
<td>-0.37</td>
<td>-0.28</td>
<td>-0.88</td>
<td>-0.63</td>
<td>-0.28</td>
<td>-0.97</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.784</td>
<td>0.368</td>
<td>0.674</td>
<td>0.551</td>
<td>0.841</td>
<td>0.407</td>
</tr>
<tr>
<td>Hypothesis accept or reject</td>
<td>Accept</td>
<td>Reject</td>
<td>Accept</td>
<td>Reject</td>
<td>Accept</td>
<td>Accept</td>
</tr>
</tbody>
</table>
According to the model, if the coefficient is positive, there is a direct relationship between major shareholders supervision and earnings management and as the coefficient is negative the relationship will be reversed. As you can see the results are varied on different years. Based on the information contained in table (3), 6815, the research hypothesis with confidence 95% was accepted in the years 2004, 2006, 2008 and 2009 and it was rejected in year 2005. Also, the relationship between independent and dependent variables were reversed in the years 2004, 2005, 2006, 2008 and 2009, and in year 2007, however, the confidence level is 95% but because of the direct relationship between variables the hypothesis is rejected.

The results of the research hypothesis testing using Panel data:

The following model was used to test the hypothesis and investigating the relationship between the major shareholders’ supervision and earnings management:

\[ EM_{t+1,n} = a_0 + a_1 OBH + a_2 FS + a_3 FG + a_4 CFO + e \]

In the model, OBH is presented to major shareholders percentage (independent variable) and EM to earnings management (dependent variable). FS, FG and CFO are represented the firm size, firm growth and operational cash flow (control variables), respectively. The hypothesis results are presented by panel data method and ordinary least squares regression in the table (4).

So, all data were combined with each other and they are estimated with ordinary least square regression. In this model the numbers of companies (levels) are 55 and the numbers of years are 6. Therefore, the total number of observations in the regression analysis is 330. In other words, the relationship between independent and dependent variables of the study is on the one hand, among 55 different companies and on the other hand, in the period 2004-2009. Therefore, the panel data method is used to obtain reliable results. According to the model, if the OBM coefficient is positive, the major shareholders’ supervision has a direct relationship with earnings management and as the coefficient is negative the relationship will be reversed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Model test (4-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>Period 2004-2009</td>
</tr>
<tr>
<td>t-statistics (P-value)</td>
<td>10.63 (0.000)</td>
</tr>
<tr>
<td>Coefficient</td>
<td>-0.69</td>
</tr>
<tr>
<td>Number of observations</td>
<td>330</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.491</td>
</tr>
<tr>
<td>Hypothesis accept or reject</td>
<td>Accepted</td>
</tr>
<tr>
<td>Type of relationship</td>
<td>Diverse</td>
</tr>
</tbody>
</table>
The results of the research hypothesis based on the information contained in table (4), expresses the acceptance of research hypothesis. In the results investigation related to this hypothesis test, t-statistics of model test at error level 5%, generally is significant and the relationship is diverse. Therefore, the results by panel data analysis method represent the hypothesis acceptance. In other words, increasing the major shareholders supervision, decreases earnings management of the study companies.

Discussion and conclusion:
The results of the research hypothesis testing

The estimation method of annual and panel data using a sample of 55 companies listed on the Tehran Stock Exchange between years 2004 to 2009 is used to test the research hypothesis. The Ordinary least Squares Regression was used to test the significant of the research hypotheses. According to the theoretical research, it was expected that the shareholders’ supervision has a significant relationship with earnings management. Model of the above hypothesis test is as follows:

\[ EM_{t, n} = a_0 + a_1 OBH + a_2 FS_{t, n} + a_3 FG_{t, n} + a_4 CFO_{t, n} + e_{t, n} \]

In the model, OBH is presented to major shareholders percentage (independent variable) and EM to earnings management (dependent variable). FS, FG and CFO are represented the firm size, firm growth and operational cash flow (control variables), respectively.

The results of hypothesis test for each of the years 2004 to 2009 research hypothesis (annual method) which is presented in table (5), it represents the hypothesis acceptance during the years 2004, 2006, 2008 and 2009 with confidence level 95% and the hypothesis rejection in the years 2005 and 2007. Also, the relationship between independent and dependent variables were reversed in the years 2004, 2005, 2006, 2008 and 2009, and in year 2007, however, the confidence level is 95% but because of the direct relationship between variables the hypothesis is rejected.

<table>
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<td>Reject</td>
<td>Accept</td>
<td>Reject</td>
<td>Accept</td>
<td>Accept</td>
</tr>
</tbody>
</table>

The results of the research hypothesis by panel data method and the ordinary least square
regression is presented in table (6). As can be seen, t-statistics of model test at error level 5%, generally is significant and the relationship is diverse. Therefore, the results by panel data analysis method represent the hypothesis acceptance.

Table 1: Results of hypothesis test by panel data method

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Period</strong></td>
<td>2004-2009</td>
</tr>
<tr>
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<td><strong>Number of observations</strong></td>
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<tr>
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<td>Accepted</td>
</tr>
<tr>
<td><strong>Type of relationship</strong></td>
<td>Diverse</td>
</tr>
</tbody>
</table>

Results of the hypothesis are consistent with the results of investigators such as Dechow and et al (1996) and Dampsi and et al (1993) and Mac Ichran (1975) and Eli and et al (2000).

**Recommendations:**
According to the research, the supervision of major shareholders in corporate governance accepted in Tehran Stock Exchange has a significant relationship with earnings management. Accordingly, it is suggested:

**Practical suggestions:**
- Investors focused decision criterion for investment to the information provided in the audited financial statement of the companies and investigates of financial analysts and stock brokers and choose their portfolio accordingly. Stock brokers Securities are guided investors in choosing the optimal portfolio so that their decisions should not be based on emotional processes.
- Government and auditing organization provided rules and standards to control every Better management of the companies in the selection of multiple methods of accounting and government regulation that could lead to manipulation and presentation of unrealistic earnings. In the process of Accounting Standards in Iran by Auditing Organization, literature it is not provided a clear definition of earnings management. Also, despite the instructions and recommendations, in cases where a final decision has yet been given to the manager and there are several ways to choose for manager. It is better that these strategies are formulated in such a way to control management behavior as possible.
- Also, it is suggested to the Tehran Stock Exchange that in addition to the profitability of the company in the Stock Council decisions they be considered another indexes such as decisions.
about how companies enter to stock market. Because earning is subject to manipulation and distortion.

Suggestions to future investigations:
A) Study of the major shareholder supervision effect on earnings management by Jones model and other proposed methods to measure earnings management.
B) In this study, the effect of major stock ownership on earnings management has not been tested in various industries, separately. It is suggested that the relationship of majority shares ownership with earnings management should be studied separately in various industries.
C) Doing research in this subject, but for increasing the reliability of results, the number of any level observations (number of firms) and time duration.

Research limitations:
Research limitations prevent misconceptions and incorrect judgments. The main limitations of this study are as follows:
A) Non-adjusted of financial statements’ accruals because of inflation that it may be effective on the results.
B) Non-control of some factors affecting the results including effect of variables such as economic factors, political conditions, the global economy regulations and so on that they are inaccessible for researcher, and may be have influence on relationships.
C) The number of studied companies are decreased, because some selection criteria (such as fiscal year end to March, non-change in the fiscal year) in selecting firms and incomplete data for some companies. So, the generalization of these results to other companies must be done cautiously. Also, the period of investigation is limited to years 2001 to 2008 because of the access problems to required information for studied companies in the year1382 and before that.

Summary and Conclusions:
The independent and dependent variables were calculated and tested by analytical data methods to test the research hypotheses each year. Then, econometric method of combining the data using a sample including 55 companies listed in Tehran Stock Exchange, between 2004 to 2009 were used. The public least squares linear regression was used to meaningful test of the research hypotheses.
Results in a 5% error level by combining the data suggest that hypothesis has been confirmed. Therefore, major shareholders supervision in firms listed in Tehran Stock Exchange has been effective on earnings management.
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