Investigation of the relationship between Corporate Governance, Earnings Management and Tax management in Tehran stock exchange

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Abstract

As an instrument of corporative governance, internal organization and decision-making processes, board of directors helps improving its effectiveness and consequently, company performance. The present research has examined the relationship between mechanisms of corporative governance, profit management and tax management in companies listed on Tehran Stock Exchange. The research hypotheses have been tested using multiple regression method with controlling determinants factors of profit management and tax management through panel data. Its population included 105 companies accepted in Tehran Stock Exchange from 2009 to 2013. The results showed a significant negative correlation between size of the board, independence of the board and CEO-duality task with profit management. The results also showed a positive significant correlation between size of the board and independence of the board with tax management, but its results show no significant relationship between CEO-duality tasks with tax management. On the other hand, the research results show negative impact of audit firm size on tax management.

Keywords: size of board of directors, independence of board of directors, CEO duality task, profit management, tax management.
**Introduction**
Main factors of fundamental changes in economic environment of Iran include generalization of economic firms’ ownership, financing through public and private partnership and privatization of governmental departments and economic firms. In such circumstances, transparency and high quality of financial information is very important because it is basis for optimal economic decisions of investors, creditors and generally, information users. In fact, profit management occurs when managers express their judgment on financial reporting and how to register financial reports, as which changes in content of financial reports mislead some shareholders about economic performance of company. The major consideration in the mentioned discussion was concentrated on the principle that a strong system of corporative governance in companies will limit opportunistic behaviors of managers and it is an important factor to reduce tendency of managers in profit management. As a result, quality and reliability features of financial reporting will be improved.
Therefore, in addition to pointing out the matter that corporative governance can increases reliability of information, this study assesses the relationship between ownership structure, profit management and tax management of the listed companies in Tehran Stock Exchange.

**Research History**
Today, the term of corporative governance is a developing and interesting concept in business world. Corporative governance considers achieving company goals and optimal allocation of society's resources at the micro and macro levels respectively. Historical record of corporative governance, in such a way that we have proposed, backs to 1990s and emerging financial scandals in some large companies. Corporative governance includes rules, regulations, structures, processes, cultures and systems that will result to achieve objectives of accountability, transparency, fairness and rights of beneficiaries.
Corporative governance mechanisms affect the disclosed information by company for its shareholders; they will also reduce probability of lack of full and proper information disclosure as well as disclosure less favorable information. Studies indicate quality and sufficiency of the disclosed information by management will be increased due to more effective supervision of board of directors.
In a research, Minik and Noga (2010) studied characteristics of corporative governance of companies on tax management. They showed that bonus program acts as an incentive for managers to invest in long-term plans and tax-reduction.
Chen et al (2010) found that family ownership can affect company's fiscal policy. They concluded that firms with family ownership adopt funding aggressive policy lesser than firms without family ownership.
In a study, Zamzam and Fotoohi (2013) investigated the effect of board of directors’ characteristics on aggressive tax strategies in French companies from 2006 to 2010. In this study, they used regression to analyze the results. Their research results indicate that size and percent of women attendance in board of directors affect aggressive tax strategy.
Poorheidari and Borhaninejad (2012) evaluated the effect of characteristics of firms’ strategic principles on tax management in firms listed in Tehran Stock Exchange. In their research, characteristics of company's strategic principles include board size, board composition, CEO
duality and size of audit firm. Their results suggest a negative relationship between board composition and size of audit firm with tax management. In his MSc thesis, Mansouri (2013) examines the relationship between corporative governance mechanisms and tax planning in companies listed on Tehran Stock Exchange for fiscal period of 2003-2011. In this study, the regression model was used. The research results indicate independence, financial knowledge, duality size; managing director role and CEO as well as government influence on board of directors have no effects on tax planning.

**Research Hypotheses**

In this research, we seek to examine the relationship between corporative governance mechanisms, profit management and tax management in companies listed on Tehran Stock Exchange, which the following hypotheses have been developed based on it.

\( H_1: \) There is a significant relationship between size of board and profit management.

\( H_2: \) There is a significant relationship between board independence and profit management.

\( H_3: \) There is a significant relationship between CEO duality and profit management

\( H_4: \) There is a significant relationship between board size and tax management.

\( H_5: \) There is a significant relationship between board independence and tax management.

\( H_6: \) There is a significant relationship between duality of CEO task and tax management.

\( H_7: \) There is a significant relationship between size of audit firm and tax management.

**Research Methodology**

In the research, we have achieved the required financial data from the audited financial statements and notes of the studied companies and the provided CDs by Tehran Stock Exchange. After collecting and categorizing data, the researcher should begin the next stage of research process known as data analysis stage. In this stage, the researcher investigates data to test and evaluate hypothesis. Firstly, the research samples are selected using list of the accepted companies in Tehran Stock Exchange from beginning of 2010 until the end of 2014. Then the research variables will be collected and calculated for the considered companies in each year. After collecting the required data, Excel and Eviews8 software were used to analyze data. In the next step, analytical data was evaluated descriptively using statistical methods. Then the research hypotheses were tested using multiple regression technique and the relationship between independent and control variables with the dependent variable has been investigated.

**Research Model**

According to theoretical bases and the research history, we use Martin and Unita to test the research hypotheses.

\( H_4 \) to \( H_7 \) hypotheses were tested using model No. 1. \( H_1 \) to \( H_3 \) hypotheses were tested using model No. 2.

**Model No. 1:**

\[
ER IT = \beta_0 + \beta_1 BR IT + \beta_2 IN IT + \beta_3 CM IT + \beta_4 AUD SIZE IT + \beta_5 SIZE IT + \beta_6 ROA IT + \beta_7 LEV IT + \varepsilon IT
\]

**Model No. 2:**

\[
DA IT = \mu
\]
ETR: tax management; BR: board size; IN: independence of board; CM: CEO duality task; SIZE: firm size; ROA: return on assets; LEV: debt-to-equity ratio; DA: discretionary accruals; AUDSIZE: audit firm size.

**Statistical Society**
There were selected a sample consisting 105 out of 478 companies accepted in Tehran Stock Exchange from 2009 to 2013. This selection began by observing data of a year that a company has been accepted on Tehran Stock Exchange. Therefore, fiscal data of the selected companies was achieved using observation during 2009 to 2013.

**The Results of the Research Model Evaluation**
Table 4.6 shows the results of the research model parameters. In this model, Durbin-Watson statistic is 1.927 that is rejected at error level 5% of autocorrelation of disturbing sentence. As a result, there is accepted the model meaningfulness at meaning level of 95%. The adjusted coefficient of determination is 0.467. This statistic indicates that independent and control variables can describe about 47% of dependent variable. There are reviewed the research hypotheses according to lack of rejecting statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Test statistic</th>
<th>Probability of error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board size</td>
<td>-0.107</td>
<td>-8.222</td>
<td>0.000</td>
</tr>
<tr>
<td>CEO duality task</td>
<td>-0.015</td>
<td>-2.858</td>
<td>0.004</td>
</tr>
<tr>
<td>Independence of board</td>
<td>-0.143</td>
<td>-7.123</td>
<td>0.000</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>0.023</td>
<td>1.365</td>
<td>0.173</td>
</tr>
<tr>
<td>ROA</td>
<td>0.247</td>
<td>12.356</td>
<td>0.000</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.005</td>
<td>1.668</td>
<td>0.096</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.532</td>
<td>5.867</td>
<td>0.000</td>
</tr>
<tr>
<td>Coefficient of determination</td>
<td>0.473</td>
<td>The adjusted coefficient of determination</td>
<td>0.467</td>
</tr>
<tr>
<td>F-statistics</td>
<td>76.645</td>
<td>Probability of F-statistic</td>
<td>0.000</td>
</tr>
<tr>
<td>Durbin-Watson statistic</td>
<td>1.927</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Testing H₁**
*There is a significant relationship between size of board and profit management.*
The level of possible errors in H₀, about lack of board size impact on profit management is 0.000 that is less than 0.05. Therefore, H₀ is rejected in confidence level of 95%. Coefficient of independent variable of board size is -0.107. Due to the negative coefficient, it can be concluded that board size has inverse significant effect on profit management.

**Testing H₂**
The research H₂ has been formulated as follows:
*There is a significant relationship between outside board members and profit management.*
The level of possible errors in H₀, about lack of outside board members’ impact on profit management is 0.000 that is less than 0.05. Therefore, H₀ is rejected in confidence level of 95%.
Coefficient of independent variable of outside board members is -0.143. Due to the negative coefficient, it can be concluded that outside board members have inverse significant effect on profit management.

**Testing H3**

*There is a significant relationship between CEO duality and profit management*

The level of possible errors in H₀, about lack of CEO duality task impact on profit management is 0.004 that is less than 0.05. Therefore, H₀ is rejected in confidence level of 95%. Coefficient of independent variable of CEO duality task is -0.143. Due to the negative coefficient, it can be concluded that CEO duality task has inverse significant effect on profit management.

**Table 4.6.** Chaw test results (F-tied)

<table>
<thead>
<tr>
<th>Description</th>
<th>F-statistics</th>
<th>Error level of 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chaw test to examine model</td>
<td>5.563</td>
<td>0.000</td>
</tr>
</tbody>
</table>

As seen in Table 6.4, F-statistic is significant at error level of 5%; therefore, Chow test has strongly rejected similarity of intercept for all periods. If computational statistic is significant at error level of 5%, hypothesis of random effects will be rejected and the fixed effects model will be accepted. To evaluate selecting estimation method, Hausmann test results have been provided in Table 4.7:

**Table 4.7.** Hausmann test

<table>
<thead>
<tr>
<th>Description</th>
<th>F-statistics</th>
<th>Error level of 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haussmann test to examine model</td>
<td>12.238</td>
<td>0.093</td>
</tr>
</tbody>
</table>

According to Table 7.4, computational statistic of Hausmann test has not been significant at error level of 5%; therefore, there has been verified the lack of correlation between individual effects and explanatory variables. Thus, random effects’ model will be used to estimate the model.

**The Results of Evaluating the Research Second Model**

Table 4.8 shows the results of the research model parameters. In this model, Durbin-Watson statistic is 1.622 that is rejected at error level 5% of autocorrelation of disturbing sentence. To specify the model, the possibility of F-statistic is 0.000 that is less than 5%. For this reason, H₀ on the model error specify is rejected. As a result, there is accepted the model meaningfulness at meaning level of 95%.

**Table 4.8.** The Results of evaluating the research second model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Test statistic</th>
<th>Probability of error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit firm size</td>
<td>0.018</td>
<td>2.103</td>
<td>0.036</td>
</tr>
<tr>
<td>Board size</td>
<td>-0.022</td>
<td>-4.173</td>
<td>0.000</td>
</tr>
<tr>
<td>CEO duality task</td>
<td>-0.01</td>
<td>-0.961</td>
<td>0.337</td>
</tr>
<tr>
<td>Independence of board</td>
<td>-0.03</td>
<td>-2.681</td>
<td>0.008</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>-0.028</td>
<td>-1.222</td>
<td>0.222</td>
</tr>
</tbody>
</table>
Testing $H_4$
There is a significant relationship between board size and tax management.
The level of possible errors in $H_0$, about lack of board size impact on effective tax rate is 0.000 that is less than 0.05. Therefore, $H_0$ is rejected in confidence level of 95%. Coefficient of independent variable of board size is -0.022. Due to the negative coefficient, it can be concluded that board size has inverse significant effect on effective tax rate.

Testing $H_5$
There is a significant relationship between outside board members and tax management.
The level of possible errors in $H_0$, about lack of outside board members’ impact on tax management is 0.008 that is less than 0.05. Therefore, $H_0$ is rejected in confidence level of 95%. Due to the negative coefficient, it can be concluded that outside board members have inverse significant effect on effective tax rate. In other words, tax management will be increased by increasing board independence.

Testing $H_6$
There is a significant relationship between duality of CEO task and tax management.
The level of possible errors in $H_0$, about lack of duality of CEO task impact on tax management is 0.337 that is less than 0.05. Therefore, $H_0$ is rejected in confidence level of 95%. As a result, duality of CEO task has no significant effect on effective tax rate.

Testing $H_7$
There is a significant relationship between size of audit firm and tax management.
The level of possible errors in $H_0$, about lack of size of audit firm impact on tax management is 0.036 that is less than 0.05. Therefore, $H_0$ is rejected in confidence level of 95%. As a result, it can be concluded that size of audit firm has a significant effect on effective tax rate.

Conclusion
The results of testing $H_1$ show a positive significant relationship between overinvestment and debt cost. It means that the more overinvestment in a company, the more level of debt cost. One of effective factors for overinvestment is free cash flow in business units. Free cash flow is important because it allows company to look opportunities that increase value of shareholder. Without cash money, there are not possible to develop new products, perform business achievements, pay cash profits to shareholders and decrease debts. In the other hand, cash money should be kept in a level that balance costs of maintaining cash money and inadequate cash
money (Saghafi et al, 2011). Lack of capital adequacy is emerged from agency theory and information economic theory as well as issues such as agency costs and information asymmetry. Therefore, according to the above-mentioned matters, it can be said that the created overinvestment because of investment inefficiency reduces interest of investors to invest on the company, which it leads to increase debt cost. The research results are consistent with obtained results by Liands and Zadno, Cho and Choi and Setayesh et al. The results of H_2, H_3 and H_4 show negative impact of ownership structure on the relationship between overinvestment and debt costs.
References


