Examining the Effect on Ownership Structure of the Relationship between bsm and Debt Cost of companies Accepted in Tehran Stock Exchange

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Abstract

This research studies the impact of ownership structure on the relationship between bsm and debt cost in companies listed on the Stock Exchange of Tehran. Theoretical bases of this research are based on the theory of representation and theory of information economy that are rooted in issues such as interests’ conflict and information asymmetry. The main issue is the lack of sufficient investment, so-called bsm. The research hypotheses have been tested using multiple regression method with controlling determinants factors of investment efficiency through panel. Its population included all companies accepted in Tehran Stock Exchange from 2010 to 2014. Finally, there were selected and analyzed 105 companies whose data was available as the research sample. The research results showed a significant positive relationship between bsm and debt cost. The results also showed significant negative impact of ownership structure on the relationship between bsm and debt costs.

Keywords: bsm, debt cost, managerial ownership, ownership concentration, institutional ownership.
1. Introduction
There have been conducted many studies on financial decisions of companies as well as factors affecting their capital structure. Many theoretical activities and actions have described the selection between financing through debt or capital stock by companies that choose proper level of debt ratio according to principle of cost-benefit. Traditionally, there have been modeled and provided tax savings due to interest profit fraction from profit as the first advantage of financial security through crediting. Other advantages of debt include management commitment to perform effectively and efficiently as well as engage creditors for attention and supervision of company.
In the other hand, debt cost indicates financial pressure and weaknesses (Scott, 1976), debt agent (Meyers, 1977) and agency conflict between managers, investors and creditors or among different groups of investors. But when investors decide investing on companies and institutions, creditors evaluate company’s risk curve. This risk curve determines the expected output by creditors that is called company’s interest cost.
Fast economic growth and changes have led to a severe completion on business, industry and investments fields. Therefore, to survive and develop their activities, companies require appropriate and timely investment and efficient using resources to achieve the expected return and improve their performance. Companies’ financial reports should provide information that are beneficial for potential investors, creditors and other users in logical investments for credit granting and similar decisions.

2. Research History
Mir and Majloof (1984) have provided a model that shows information asymmetry between companies and investors will lead to underinvestment. They have shown when managers act toward the interests of current shareholders and company needs financing for projects with positive net current value, managers may avoid financing by issuing bonds to lower costs, even they ignore investment opportunities.
Palmeros et al (2004) argue that poor quality of financial information causes information asymmetry between buyers and sellers of company’s stocks that leads to increase bid price difference of stocks’ transactions and reduce liquidity of stock market. In such conditions, shareholders will experience more risk in market.
Fe’ali and Ebrahimi Kordlar (2008) have investigated the relationship between company ownership and value. The purpose of this research was to investigate the role of institutional shareholders and percent of irresponsible managers as criteria of company ownership criteria on company value. For this purpose, they have reviewed four-year data in 97 companies. The research results showed that as institutional ownership is high in companies listed on the Stock Exchange of Tehran, there is a significant relationship between institutional shareholders and company value.
Kordestani and Haddadi (2009) showed a negative relationship between capital cost according to company portfolio and conservative based on time asymmetry of interest. There is also a significant positive relationship between capital cost and conservatism based on ratio of market value to book value of stocks.
In their study, Hajiha and Maghami (2014) examined the impact of corporative diversification strategy on debt cost of companies listed on the Stock Exchange of Tehran. In this research, commercial and geographical diversifications were considered as independent variables; debt
cost as dependent variable; and variables of company size, company growth, profitability and company risk as control variables.

3. Research Hypotheses

- **H1**: There is a significant relationship between overinvestment and debt cost.
- **H2**: Managerial ownership has a significant impact on the relationship between overinvestment and debt costs.
- **H3**: Institutional ownership has a significant impact on the relationship between overinvestment and debt costs.
- **H4**: Ownership concentration has a significant impact on the relationship between overinvestment and debt costs.

4. 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. The library method has been used to develop the research literature and history. 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.

5. Research Model

According to theoretical bases and the research history, we use Cho and Choi Model (2014) to test the research hypotheses.

\[
COST = \beta_0 + \beta_1 OVERINVE + \beta_2 MO + \beta_3 IO + \beta_4 OWN + \beta_5 OVERINV * MO + \beta_6 OVERINV*IO+\beta_7 OVERINV * OWN + \beta_8 SIZE + \beta_9 LEVE + \beta_{10} ROA + \beta_{11} CFO + \epsilon
\]

Where:
- COST: debt cost; OVERINVE: overinvestment; MO: managerial ownership; IO: institutional ownership; OWN: ownership concentration; SIZE: firm size; LEVE: financial leverage; ROA: return on assets; CFO: ratio of operating cash flow; \(\beta_0\): intercept; \(\beta_1, \beta_2, \ldots \beta_n\): coefficients of the research variables; \(\epsilon\): the model remaining.

6. Statistical Society

There were selected a sample consisting 105 out of 478 companies accepted in Tehran Stock Exchange from 2010 to 2014. This selection began by observing data of a year that a company has been accepted on Tehran Stock Exchange. As unavailability of some information over the five-year period, there were removed some observations from the prototype; finally, there were selected 105 companies as the research sample.
7. The Results of the Research Model Evaluation

Table 4.6 shows the results of the research model parameters. In this model, Dorbin-Watson statistic is 2.053 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%. The adjusted coefficient of determination is 0.935. This statistic indicates that independent and control variables can describe about 93% 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>Overinvestment</td>
<td>0.101</td>
<td>2.531</td>
<td>0.012</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>-0.023</td>
<td>-4.215</td>
<td>0.000</td>
</tr>
<tr>
<td>Managerial ownership</td>
<td>-0.005</td>
<td>-2.046</td>
<td>0.041</td>
</tr>
<tr>
<td>Ownership concentration</td>
<td>-0.05</td>
<td>-6.698</td>
<td>0.000</td>
</tr>
<tr>
<td>IO*OVERINV</td>
<td>-0.05</td>
<td>-3.466</td>
<td>0.001</td>
</tr>
<tr>
<td>OWN*OVERINV</td>
<td>-0.001</td>
<td>-2.227</td>
<td>0.027</td>
</tr>
<tr>
<td>Concentration of ownership</td>
<td>-0.011</td>
<td>-9.079</td>
<td>0.000</td>
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<tr>
<td>Financial leverage</td>
<td>0.000</td>
<td>-0.073</td>
<td>0.942</td>
</tr>
<tr>
<td>ROA</td>
<td>0.013</td>
<td>1.153</td>
<td>0.25</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.007</td>
<td>3.869</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.022</td>
<td>0.878</td>
<td>0.038</td>
</tr>
</tbody>
</table>

F-statistics             65.989  Probability of F-statistic 0.000
Coefficient of determination 0.949  The adjusted coefficient of determination 0.935
Durbin-Watson statistic   2.053

Testing H₁

The research H₁ has been formulated as follows:
*There is a significant relationship between overinvestment and debt cost.*

The level of possible errors in H₀, about lack of overinvestment impact on debt cost is 0.012 that is less than 0.05. Therefore, H₀ is rejected in confidence level of 95%. Coefficient of independent variable of overinvestment is 0.101. Due to the positive coefficient, it can be concluded that overinvestment has direct significant effect on debt cost.

Testing H₂

The research H₂ has been formulated as follows:
*Managerial ownership has a significant impact on the relationship between overinvestment and debt costs.*

The level of possible errors in H₀, about lack of managerial ownership impact on the relationship between overinvestment and debt cost is 0.012 that is less than 0.05. Therefore, H₀ is rejected in confidence level of 95%. Coefficient of independent variable of overinvestment is -0.98. Due to
the negative coefficient, it can be concluded that managerial ownership has negative significant effect on overinvestment and debt cost.

Testing $H_3$

The research $H_3$ has been formulated as follows: 
Institutional ownership has a significant impact on the relationship between overinvestment and debt costs.

The level of possible errors in $H_0$, about lack of institutional ownership impact on the relationship between overinvestment and debt cost is 0.001 that is less than 0.05. Therefore, $H_0$ is rejected in confidence level of 95%. Coefficient of independent variable of overinvestment is -0.05. Due to the negative coefficient, it can be concluded that institutional ownership has negative significant effect on overinvestment and debt cost.

Testing $H_4$

The research $H_4$ has been formulated as follows: 
Ownership concentration has a significant impact on the relationship between overinvestment and debt costs.

The level of possible errors in $H_0$, about lack of ownership concentration impact on the relationship between overinvestment and debt cost is 0.027 that is less than 0.05. Therefore, $H_0$ is rejected in confidence level of 95%. Coefficient of independent variable of overinvestment is -0.001. Due to the negative coefficient, it can be concluded that ownership concentration has negative significant effect on overinvestment and debt cost.

8. 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. In different programs, business units should consider level of investment by considering limitation of organizational resources. It is conducted through programs’ assessment methods including current net value. According to the method, investment on one or more programs will be justified when their current net value is positive. Therefore, accepting programs with negative current net value will lead to overinvestment and finally, lack of investment optimization. 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 (2005), Cho and Choi (2014) and Setayesh et al (2013).

The results of $H_2$, $H_3$ and $H_4$ show negative impact of ownership structure on the relationship between overinvestment and debt costs.
Strategic role of corporate governance to decrease agency costs and its role in signaling to decrease cost of information is based on lack of certainty. When a company has no need to intra-organizational finance because of more internal capital than capital costs, it may be encountered with overinvestment. Accordingly, agency mechanisms decrease agency costs and limit overinvestment.

Quality of corporate governance and consequently, quality of disclosure, will potentially decrease overinvestment that it leads to increase investment efficiency. As strong corporate governance mechanism reduces information asymmetry between managers and shareholders, possibility of this idea is decreased that investors assumed companies have issued negotiable papers because of financial poverty. Therefore, capital providers determine current values of companies exactly; as a result, fund costs will be reduced. Accordingly, reducing fund costs due to inappropriate selection of shareholders will increase investment efficiency. The research results are consistent with obtained results by Bushman and Smith (2001), Pindad and Tore (2005), Igbi and Anna (2008), Choi et al (2010) and Cho and Choi (2014).
References


