

Effect of ownership structure and capital structure on decisions of external financing in companies listed on Tehran Stock Exchange

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Abstract: According to agency theory, ownership structure as part of corporate governance, a result of efforts to minimize the costs associated with the separation of control and ownership of the company. Given the importance of the aim of this investigation was to determine ownership structure and capital structure decisions in external financing in companies listed on the Tehran Stock Exchange. In this study, using data from 105 companies listed on the Tehran Stock Exchange in the period 1388 to 1393 was to examine this issue. Was used to evaluate the external financing of the balance sheet approach. For this purpose, two of the leverage ratio (ratio of debt to total assets long term debt to total assets) as dependent variables were calculated. Institutional ownership and property management as well as two criteria were used to check the ownership structure. To test the hypotheses, two models were estimated using multiple regression. The results show that institutional ownership is positively related to financing through long-term loans and the results reflect a positive relationship between managerial ownership and negatively correlated with financial leverage these variables are financed through long-term loans.

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Introduction

Institutions and firms, especially those in the industry sector, need substantial capital so as to develop and survive their manufacturing activities. Moreover, they inevitably depend upon financial markets to raise their finance. Financial markets play an important role to supply required financial resources. Methods and level of financing are important issues facing financial managers.

One important mechanism of corporation governance is appearance of institutional investors as capital owners. According to Gilan and Starks, institutional investors play a crucial role to make changes in many corporation governance systems.

Managerial ownership is another internal corporation governance mechanism which is considered as a factor to decrease conflict of interest and consequently it makes value for the company. Different researches suggest that, managers make attempts to control the company if they own share. Because, the more managers have share in the company, the more they try to increase its value.

When the manager owns total company's share, agency costs of stockholders would decrease at zero. It means that, a positive relationship between agency costs of stockholders and separation of ownership and control is generated. However, when managers'

ownership is not complete, agency costs of stockholders would proportionally distribute among them. Hence, they shirk their responsibilities toward the company or spend additional revenues.

Literature review

In a research, Aslan and Komar (2012), studied the structure of strategic ownership and cost of debt. Kedang et al (2014) studied the relationship between capital structure and performance of listed companies in Kenya. The research provided marked evidences about leverage significance and negative effect of profitability of organizations in Kenya. Although, profitability had no effect on Tubin's Q ration as a factor in company's value, however, results showed that, sale growth and company's size are important factors in drivers of Tubin's Q ratio. In a research, San et al (2015), studied the influence of agency problems on ownership structure of company's financial leverage as well as foreign financing. They investigated British companies from 1998-2012. Their findings showed that, financial leverage reduces in companies with more centralized managerial ownership.

Iranian researches

In a research, Honarbakhsh et al (2012), studied the relative effect of commercial strategies on the relationship between financial leverage and

performance of listed companies in the Tehran Stock Exchange.

Moreover, results showed that, there is a direct link between divided profit and company's performance in companies with cost leadership strategy. However, in the product interest strategy, there is a positive relationship between company's size and its performance, but there is a negative link between divided profit and company's performance.

In a research, Soltani and Nadem (2013), studied the influence of capital and ownership structures on EPS and DPS information content through the margin method and cumulative yield for listed companies in the Tehran Stock Exchange.

Results of hypotheses testing suggested that, capital structure has a significant influence on DPS and EPS information content. It means, increased company's reliance on debt financing leads to reduce information content.

In a research, Izadi Nia et al (2013), studied the relationship between financial leverage and earning management in listed companies in the Tehran Stock Exchange. They found that, there is an indirect significant link between financial leverage and earning management.

Research hypotheses

Hypothesis 1: there is a significant link between managerial ownership and debt ratio to total assets.

Hypothesis 2: there is a significant link between institutional ownership and debt ratio to total assets.

Hypothesis 3: there is a significant link between managerial ownership and ratio of long-term debt to total assets.

Hypothesis 4: there is a significant link between institutional ownership and ratio of long-term debt to total assets.

Population

Using a systematic sampling because of large extent of population size and inconsistency among members, following situations were considered to select population:

1. Over the given period, companies must have continuous activity, as well as their stock needs to be traded without a major interruption (maximum one month).

2. By imposing above mentioned restrictions, all 105 selected companies have had the ability to be used in the population. Using a sample of 105

companies, hypotheses tested and there was no need to use another sampling.

Methodology

The present research aims to study effects of capital and ownership structures on foreign finance. In the applied research, the descriptive-analytical method was used to study consistency among vindicators. The explanatory research used historical financial statements of understudied companies.

Research model

The statistics hypothesis is tested to determine whether specification of population given obtained data affirmed or not.

Accordingly, the following model was applied to test research hypotheses:

Equation (1.3)

$$Lev = \alpha + \beta_1 MOS + \beta_2 IO + \beta_3 Size + \beta_4 ROE + \epsilon$$

Equation (2.3)

$$DEBIT = \alpha + \beta_1 MOS + \beta_2 IO + \beta_3 Size + \beta_4 Age + \epsilon$$

Where:

LEV as financial leverage is the ratio of total debts to total assets.

DEBT is the ratio of long-term debt to total assets.

MSO as managerial ownership equals the ratio of total share of the board of directors to total issued stocks.

OIS as institutional ownership is obtained by division of institutional ownership's share into total shares.

AGE as company's age is the natural logarithm of years through which company has admitted in the Stock Exchange.

Size, company's size, is obtained by the logarithm of total assets.

REO as the return on equity is obtained by the ratio of net profit to return on equity.

Model estimation through panel data

Using a sample of 105 companies from 2009-2014 the research was done. Accordingly, panel data was applied to test hypotheses.

F-Limer test

In the present research, panel data method is accepted, otherwise, when research data are proper hypotheses are tested by pooled data.

Index 4 represents the output of analysis software for the F-Limer table (Table 1).

Table 1 suggests results of the F-Limer test.

Table 1. F-Limer test

| Chav test | F-statistics | P-value | F-statistics results | Test type |
|-----------|--------------|---------|----------------------|-------------|
| Model 1 | 0.78 | 0.51 | H0 is accepted | Pooled data |
| Model 2 | 9.76 | 0.00 | H0 is rejected | Panel data |

Hasman test results

As model needs panel data, the Hasman test is applied. To perform a Hasman test, model was first estimated by a random effect method, and then

Hasman test was done. Table 2 represents Hasman test results.

Table 2. Hasman test results

| Hasman test results Hasman test | F-statistics | p-value | Hasman test results |
|---------------------------------|--------------|---------|---------------------|
| Model 2 | 31.75 | 0.00 | Fixed effect model |

Accordingly, all data were combined and estimated through an ordinary least square (OLS).

Studying regression classic hypotheses

Classic hypotheses of the linear regression were also estimated in the present research. So as to determine correlation among components Dorbin-Watson statistics was performed. Tables of hypotheses results suggest results of Dorbin-Watson statistics.

It should be note that, in order to avoid multicollinearity in the present research cross-sectional data and time series were used.

Data analyses through panel data

Actually, there are two criteria to accept or reject research hypotheses:

- 1- Significance or P-value should be less than 0.05.
- 2- Absolute value of t-students' statistics in 95% significance level should be more than 2.

For each of above-mentioned cases, obtained test statistics may accept or reject hypothesis.

Hypotheses testing

Table 3 suggests findings of significance testing for the research model from 2009-2015.

Table 3. Findings of data analysis for hypotheses testing of model 1

| $Lev = \alpha + \beta_1 MOS + \beta_2 IO + \beta_3 Size + \beta_4 ROE + \varepsilon$ | | | | | |
|--|---------------------|----------|---------|----------------|---------------|
| Description | β coefficient | t-static | p-value | F-static / p.v | Durbin-Watson |
| Intercept | 0.344 | 9.13 | 0.00 | | 1.78 |
| MSO (managerial ownership) | 0.267 | 1.30 | 0.19 | 22.79 | |
| OIS (institutional ownership) | 0.036 | 4.24 | 0.00 | 0.000 | |
| AGE (company age) | 0.010 | 2.33 | 0.01 | | |
| SIZE (company size) | 0.46- | 0.49- | 0.62 | | |
| Adjusted determination coefficient | | | | 0.47 | |

As it can be seen in Table 4, F-statistics is significant in 95% significance level. Accordingly, the research model was significant as well as independent and control variables could describe the dependent variable. Moreover, adjusted determination coefficient was 047 (R2). In the model, the ratio of debt to total asset, managerial and institutional ownership were dependent and independent variables, respectively. Findings of table 4 suggest that, t-statistics of

managerial ownership (MSO) independent variable, its p-value and coefficients were 1.30, 0.19 and 0.26, respectively.

As the given error level for the research is 0.05, so managerial ownership variable has no significant effect on the ratio of debt to total assets. Consequently, the first hypothesis is rejected in %95 significance level.

Table 4. Results of data analyses to test research hypotheses of model 2

| $DEBIT = \alpha + \beta_1 MOS + \beta_2 IO + \beta_3 Size + \beta_4 Age + \varepsilon$ | | | | | |
|--|---------------------|----------|---------|----------------|---------------|
| Description | β coefficient | t-static | p-value | F-static / p.v | Durbin-Watson |
| Intercept | 5.12 | 5.86 | 0.00 | | 1.90 |
| MSO (managerial ownership) | 0.80- | 5.58- | 0.00 | 22.79 | |
| OIS (institutional ownership) | 0.98 | 4.35 | 0.00 | 0.000 | |
| AGE (company age) | 0.30 | 8.30 | 0.00 | | |
| SIZE (company size) | 0.86- | 2.28- | 0.02 | | |
| Adjusted determination coefficient | | | | 0.84 | |

In two latter hypotheses, dependent variable was the ratio of long-term debt to total assets, but independent variables were managerial and institutional ownership. According to findings in table

4, t-statistics of managerial ownership (MSO), p-value as well as its coefficient were -5.58, 0.00 and -5.58, respectively. As the given error level for the research was 0.05, so, the managerial ownership has a

significant effect on financing through long-term debt. Consequently, third hypothesis is accepted in %95 significance level. Hence, there is a significant link between institutional ownership and the ratio of long-term debt to total assets. Consequently, fourth hypothesis is accepted.

Conclusion

Given the agency theory of ownership structure as a factor in the corporation governance, attempts are made to minimize costs of separating control and company ownership. Agency costs in companies with high managerial ownership are low due to goal congruence of the manager and shareholders. However, it is also low in companies with great block shareholders who supervise managerial activities.

The present research aims to study effects of ownership and capital structures on finance decisions. Findings suggest that, managers may run up debt to finance when they use their fringe benefits highly. It means that, a centralized managerial ownership reduces control of managers' activity, so increased usage of debt ratio can take the place of issuing of share or other alternatives like using retained earnings.

Moreover, studying the relationship between managerial ownership and financing via short-term debt showed that, managers with more centralized managerial ownership prefer using short-term debt to foreign finance so as to decrease bankruptcy risk. Appearance of institutional owners as capital owners is an effective, important mechanism affecting corporate governance.

Findings of studying the variable on financing decisions in the second hypothesis suggest that, many institutional owners choose other alternatives for financing. However, when institutional ownership is high, financing via taking out long-term loans is preferred to use short-term debt. The reason is that, institutional owners can actively manage their portfolio and they encourage managers to make efficient decisions. Another reason is diversity of institutional investors. Institutional investors could be passive or active. It is obvious that, institutional ownership in given companies are passive.

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