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Investigation of the relationship between ownership structure and cost of equity in companies listed on the Tehran Stock Exchange

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Abstract

One of the main issues in financial literature is always to decide on the optimal solutions about capital investment and capital structure in order to increase the overall value of the economic unit. In this regard, the issues of financing in general, and particularly the cost of capital are at the forefront. The present study aims to investigate the relationship between ownership structure and equity costs in 105 companies listed on the Tehran Stock Exchange (TSE) during the period of 2010 to 2014, which has been tested using multiple regression with controlling factors determining the cost of equity. In this research, factors of structure of ownership, institutional ownership and managerial ownership are considered and two hypotheses are developed based on these factors. The results of research hypotheses show that there is a negative and significant relationship between institutional ownership and capital cost. These results also showed that there is a negative and significant relationship between managerial ownership and equity costs.

Keywords: Institutional ownership, Managerial ownership, Cost of equity

INTRODUCTION

Despite the increasing competition in the business environment, access to scarce resources of capital is one of the management concerns. Each supplier of capital resources demands returns consistent with the risk they have accepted. The cost of capital plays an important role in financing decisions. In order to determine the financial resources of the company, managers should determine the cost of financing and the factors affecting it. Capital cost is considered as a measure for performance appraisal in the economic value added model. Conducted studies show that providing timely information and high quality of corporate governance reduce information risk and information asymmetries. Hence, investors' uncertainty about corporate financial information will be reduced and demand less returns, and eventually companies will incur less capital costs. In the present study, attempts have been made to investigate empirically this issue in the Iranian business environment. Therefore, in this research, we are looking for the answer to the question of whether there is a meaningful relationship between the ownership structure and the cost of equity?

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THEORETICAL FOUNDATIONS

Corporate governance is a type of monitoring used in companies to reduce information asymmetry and to control the freedom of managers in financial reporting. Thus, it affects the final financial statements and increases the ability to rely on reported accounting figures. Big shareholders are more financially able than other smaller shareholders to make better control and confidence and dilute the undesirable effects of ownership and management separation by reducing information asymmetries between users and suppliers of financial statements. Given that financial reporting should provide users with relevant information to be used in their decision making process, the amount and accuracy of information

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can influence the cost of capital. The high quality of information and information symmetry lead to a greater coordination between managers and investors in relation to investment decisions. Conversely, as much information asymmetry between managers and investors is higher, they demand higher capital costs for higher risk acceptance. Timeliness means that the information is available for decision makers before it loses its ability to influence decision-making.

RESEARCH BACKGROUND

Foreign Background

Matt Noor and Solang (2010) investigated the impact of corporate governance mechanisms including dividend yield, ownership concentration, institutional ownership, foreign ownership, shareholding of the board of directors, duplication of managerial responsibilities, and the percentage of non-executive members of the board of directors on the value of 403 active companies in the Malaysian Stock Exchange between 2002 and 2005. They have used the Kyoto bin criterion to determine the value, and have concluded that there is a positive and significant relationship between corporate governance mechanisms and company value.

Chu and Choi (2014) investigated the relationship between more investment and cost of capital and the impact of ownership structure on this relationship. The results of the research showed that there is a positive and significant relationship between the more investment and the cost of capital, these results also showed that the relationship between more investment and cost of capital in firms with a high percentage of institutional and management shareholders is weaker.

Khalif & Azam (2015) conducted a research entitled "Voluntary Disclosure, Ownership Structure, Delay in Reporting Profit and Cost of Ownership". They concluded that there is a negative and significant relationship between the cost of equity and voluntary disclosure. The results of the research also show that there is a positive and significant relationship between the cost of equity, state ownership structure and delays in profit reporting.

Internal Background

Hajiha & Sobhani (2013) investigated in their article, the effect of audit quality on capital cost in companies listed on the Tehran Stock Exchange. They concluded that the size of the audit firm and the continuation of the auditor's selection have a reverse and significant relationship with the cost of capital.

Khodamipour & Amininia (2013) studied the relationship between tax avoidance and the cost of debt and the impact of institutional ownership on this relationship. The obtained results from this research showed that there is a negative relationship between tax avoidance and debt costs. In addition, the results indicate that the level of institutional ownership does not have a significant impact on the relationship between tax avoidance and debt costs.

Aghaeian & Ramezan Ahmadi (2016) explored in their research, the relationship between audit quality, timely disclosure and the cost of capital in 102 companies listed on the Tehran Stock Exchange during the period from 2009 to 2013. The obtained results from research hypotheses show that there is a negative and significant relationship between the size of the audit firm and the cost of capital.

RESEARCH HYPOTHESES

First Hypothesis

There is a significant relationship between institutional ownership and equity costs.

Second Hypothesis

There is a significant relationship between managerial ownership and equity costs.

RESEARCH METHOD

In terms of objective, this is an applied study. The research method is quasi-experimental and describes the relationship between variables through correlation analysis. In this research, historical information of companies has been used. According to the research objectives, a regression model has been used to examine the hypotheses. This research is based on real stock market figures and annual audited financial statements of listed companies on the Tehran Stock Exchange.

STATISTICAL POPULATION, SAMPLING METHOD AND SAMPLE SIZE

The period of this research is from 2010 to 2014. The statistical population of the research consists of all companies listed on the Tehran Stock Exchange.

Considering the limitations, 105 companies during the period from 2010 to 2014, which had the above conditions, they were selected as the study sample.

DESCRIPTION OF MEASUREMENT OF RESEARCH VARIABLES

The variables of this research include three groups of dependent, independent and control variables as follows.

Dependent variable Cost of Equity

The Gordon Growth Model is used to calculate equity costs. The method of calculating equity costs through the Gordon Growth Model (Damodaran, 2002) is as follows: $k=e/p$

In this model:
K: Cost of equity rate
E: Expected earnings per share in the next year
P: Current price of each share
e= (1+g)* Earnings per share of the current year
G: Dividend growth rate

Independent Variables

Institutional Ownership

It is obtained from total equity for banks, holdings, investment Companies, pension funds, governmental institutions, and government companies on total shares issued by the company.

Management ownership

This variable is defined as the stock at the disposal of the board of directors and CEO.

Control Variables

Delay in earnings reporting

Equals the interval between the end of the fiscal year and the date of issue of the financial statements

MB: Equals the ratio of market value to book value of equity

Leverage (LEV): Equals the ratio of the sum of debt to total assets

Return on Assets (ROA): Equals the ratio of net profit to total assets

Company Size (SIZE): Equals the natural logarithm of the total assets of the company

RESEARCH MODEL

According to theoretical foundations and research background, the following model is used to test the research hypotheses:

$$COST=\beta_0+\beta_1 MO+\beta_2 IO+\beta_3 ERL+\beta_4 MB+\beta_5 LEV+\beta_6 ROA+\beta_7 SIZE+\varepsilon$$

In this model:

COST: Cost of equity; MO: Managerial ownership; IO: Institutional ownership; ERL: Delay in earnings reporting; MB: Ratio of market value to book value of equity; LEV: Financial leverage; ROA: Return on assets; SIZE: Company size

RESEARCH FINDINGS

Descriptive Statistics

As shown in Table 1, the results of the distribution of research variables, the average of profit reporting after the end of the fiscal year was 74 days; on average, 72% of shares of sample companies were held by institutional shareholders, the average cost of shareholders' equity was 0.351; on average, the financial leverage was 0.675, showing a high percentage of debt financing; the ratio of market value to book value of equity was 1.839; On average, 0.585 of shares of sample companies were held by management shareholders; also the average of profitability of assets was 0.086; and finally the average natural logarithm of assets was 13.358.

Inferential Statistics

The method applied in this study is multivariate regression using combined data. In this study, Durbin-Watson test was used to identify the autocorrelation of model. If the value of Durbin-Watson statistic is within the range (1.5-2.5), the independence of model error can be accepted.

Table 2 shows the results of estimating the parameters of the research model. For this model, Durbin-Watson statistic is equal to 2.327, which rejects the autocorrelation of the remaining sentences at the error level of 5%. The probability value related to the F statistic for investigating the model is 0.000, which is less than 5%. As a result, in confidence level of 95%, the significance of the model

Table 1: Descriptive statistics of the research variables

Variable	Mean	Median	Maximum	Minimum	Standard deviation
Delay in earnings reporting	74.26	75	130	20	26.0956
Institutional ownership	0.721	0.807	1	0	0.251
Cost of equity	0.351	0.084	21.819	–25.963	2.432
Financial leverage	0.675	0.661	1.824	0.059	0.261
MB	1.839	1.732	5.537	–4.421	1.662
Property management	0.585	0.7	1	0	0.316
Return on assets	0.086	0.084	0.582	–0.523	0.142
Size of the company	13.358	13.404	18.395	10.031	1.237

Table 2: Results of the estimation of the research model

Variable	Coefficient	Test statistic	Probability of error
Institutional ownership	–4.307	–8.929	0.000
Delay in earnings reporting	0.014	4.004	0
Property management	–0.056	–4.769	0.000
Financial leverage	0.198	2.234	0.026
MB	–0.003	–0.282	0.778
Return on assets	0.563	2.265	0.024
Size of the company	–0.069	–1.826	0.069
y-intercept	3.114	6.53	0.000
The coefficient of determination	0.749	Adjusted coefficient of determination	0.681
F statistic	10.967	Probability of F statistic	0.000
Durbin-Watson statistic	2.327		

is accepted. The value of the adjusted coefficient of determination of the model is equal to 0.681. This statistic indicates that about 68% of changes of the dependent variable can be described by independent and control variables. Considering the non-rejection of model statistics, the research hypotheses are examined.

TEST HYPOTHESES

First Hypothesis Testing

The probability error level related to the null hypothesis that suggests the ineffectiveness of institutional ownership over the cost of equity is 0.000 and smaller than 0.05. Therefore, the H0 is rejected with confidence level of 95%. The coefficient of the independent variable of institutional ownership is –4.307. Given the fact that coefficients are negative, it can be concluded that institutional ownership has a significant and reversible effect on the cost of equity.

Second Hypothesis Testing

The probability error level related to the null hypothesis that suggests the ineffectiveness of managerial ownership over the cost of equity is 0.000 and smaller than 0.05. Therefore, the H0 is rejected with confidence level of 95%. The coefficient of the independent variable of managerial ownership is –0.056. Given the fact that coefficients are negative, it can be concluded that managerial ownership has a significant and reversible effect on the cost of equity.

CONCLUSION

The obtained results from the first hypothesis test show that there is a negative and significant relationship between the percentage of ownership of institutional shareholders and the cost of equity; and this means that the higher the percentage of ownership of institutional shareholders, the lower the cost of equity.

Big shareholders are more financially able than other smaller shareholders to make better control and confidence and dilute the undesirable effects of ownership and management separation by reducing information asymmetries between users and suppliers of financial statements. Therefore, institutional owners are the tools to reduce information risk and increase the quality of financial reporting, and reducing information risk reduces also the cost of ordinary stock capital.

The results of testing the second hypothesis of the research show that there is a negative and significant relationship between the percentage of ownership of management shareholders and cost of equity; and this means that the higher the percentage of ownership of the management shareholders, such as the board of directors and the CEO, the cost of equity is reduced. The high quality of corporate governance resulting from an increase in the ownership of stockholders increases the credibility of information available to investors. The higher the accuracy and quality of the information provided by the company, the lower the risk of information and consequently the amount of uncertainty of investors is reduced. Reducing uncertainty leads to demand for lower returns by investors and, on this basis, it can be argued that this leads to a reduction in the cost of equity.

Considering that financial reporting should provide users with relevant and timely information in order to be used in their decision-making process. The timing of this information can affect the cost of equity. Usually, when the information is released with delay, the quality of financial reporting is reduced.

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