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The Relationship between Corporate Governance, Capital Structure and Systematic Risk in those Firms Listed at Tehran's Stock Exchange

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Abstract

The goal of this study is to analyze the relation between corporate governance versus capital structure and systematic risk in the companies, which are accepted in Tehran Stock Exchangeby April 2011. To do so, the data of 81 firms was collected and the findings from the testing the hypotheses showed that 13 hypotheses(meaningful relation between institutional ownership and the costs of companies' accumulated yield – institutional ownership and debt costs – managerial ownership and costs of ordinary shares - managerial ownership and costs of accumulated yield - managerial ownership and costs of debts - family ownership and costs of ordinary shares - family ownership and costs of debts – percentage of unsalaried members of directing board and costs of debts – sameness of board of directors' chief and managing director and costs of accumulated yield) out of 18 hypotheses rejected and 5 hypotheses were confirmed (ownership concentration and costs of accumulated yield - percentage of unsalaried members of directing board and costs of accumulated yield - percentage of unsalaried members of directing board and costs of ordinary shared - percentage of unsalaried members of directing board and costs of debts - sameness of board of directors' chief and managing director and costs of ordinary shared - sameness of board of directors' chief and managing director and costs of accumulated yield. Also 4 hypotheses out of 6 regarding the main hypothesis are rejected (institutional ownership and systematic risk – managerial ownership and systematic risk - percentage of unsalaried members of directing board and systematic risk - sameness of board of directors' chief and managing director and systematic risk) and 2 hypotheses were confirmed (family ownership and systematic risk – ownership concentration and systematic risk).

Keywords: Corporation Governance, Capital Structure, Systematic Risk, Tehran Stock Exchange.

Introduction

Nowadays conserving public benefits, respecting the rights of stakeholders, increasing information transparency and corporates' commitment are among the most important ideals that are considered by various regulatory authorities more than the past. Realization of such ideals requires tenacious regulations and appropriate administrative mechanisms of which the most important one is theSystem of corporate governance. The lack of public interest fulfillment is probably the result of the absence of corporate governance mechanisms that are capable of corresponding with the mentioned criteria and leading to the firm's marginal goal achievement that is increasing stakeholders' interest and firm performance improvement[1]. Based on studies carried out, if corporate make efforts in order to improve corporate governance, this will lead to a positive impact on performance and value[2]. In today's world considering the competitive market circumstances it is very necessary to determine an appropriate financial approach for sustaining profitability and corporate survival. Financing the firms is divided based on internal financing policies and External financing resources that can be supplied by short or long term methods. Internal financing requires the firm to have been profitable formerly and is supplied by retained earnings that are good sources for financing and in external financing we ought to finance from debts and stocks[3]. Based on what was mentioned above cost of equity capital is one of the most significant tools in many financial and managerial decisions that is influenced by factors such as financial leverage, Shareholders, board composition, type of activity, liquidity and corporate size[4]. Considering the fact that investment attraction and financing abilities are crucial for surviving in the contemporary competitive market, so is the existence of capital market for national economies. Investors' active role in such markets is necessary for fulfilling the main goal of these markets and as a result attracting investors is of high importance[5]. On the other hand investors are trying to measure investment risks to manage them. This attracted a lot of attention from the researchers risk and its measurement[6]. Investment risk is divided into the categories of systematic risk and non-systematic risk. Systematic risk is the sensitivity of return on assets in market; in others words systematic risk is the risk that exists among different units and being influenced by economic factors is inevitable[7]. Non-systematic risk is the one that has been diversified and can be decreased [8]. Capital accumulation is what triggers development and economic growth and is of high importance in macro economy policy making. The process of capital accumulation in economy mainly depends on increasing

savings from internal and external resources as well as accumulating, guiding and optimal devotion of resources broadly through a proper mechanism. In old-fashioned system distinguishing management from possession was the most important concept. This based the ground for capital growth and development of economic enterprises and made a big change in wealth production system. In this study we seek the relation between corporate governance versus capital structure and systematic risk in the companies. Knowing that capital cost is a major factor in managerial and financial decisions, and that managers are supposed to be fully aware of project return rate, expected rate of return on investment and investment risks, this study looks for the answer to the question that whether there is a relation between corporate governance versus capital structure and systematic risk in the companies and also the quality and scale of such a relation in case of existence.

Literature review

Corporate governance: Firms would benefit a proper framework of governance in these fields: access to better financial resources, less equity capital cost, better performance and behavior in satisfying beneficiaries[9].

Corporate governance is the process that guides and manages business enterprises in value improvement and accountability for the marginal goal of increase in stake holders capital in long term and simultaneously bearing in mind other beneficiaries' interest.

Capital structure: Capital structure consists of a composition of debts and equity which are used as a financing resource[9]. Capital structure is a composition of debts and equity for financing firms for long-term property. This structure consists of long-term debts, preferred stock and common stock. Capital structure is in fact a composition of common stock, preferred stock and its subcategories, retained earnings and debts that are used for financing in business enterprises[10]. Deciding on what the composition of capital structure must be, is a major managerial task. The most important factor here is the determination of a proper and desired ratio for debt and stock. This depends on various factors such as capital structure being affected by internal factors that is generally for increasing value in the firm. In general financing and capital structure are divided to internal and external resources based on the place of finance. Internal resources mean the ones supplied from internal liquidity that are retained earnings and savings. The external resources include external liquidity. Considering what was mentioned, the left hand side of a balance sheet determines the financings of the resources on the right hand side. In other words the left hand side of a balance sheet is a reflection of a business's capital structure. So capital structure is a juxtaposition of funding resources concluded from debts, common stock, preferred stock and retained earnings.

Systematic risk: The importance of systematic risk is clear for the cases it is used for. Deciding on make a portfolio, portfolio performance evaluation, capital budget decision making and evaluation of turnover rate for evaluation destinations are some examples for which is used. The common method for systematic risk measurement is using the model of capital assets' pricing. This model was presented by Sharp[11]. Markovits model proposes that the stock, whose revenue has low coherency with other portfolio securities, decreases the portfolio variance. The model of capital assets' pricing suggests that a stock's expected revenue is depended on its systematic risk. Here in this equation, β resembles systematic risk:

$$B_i = \frac{r_{im} S_m S_i}{S^2_m}$$

So as the market is having an ascending trend, the higher the systematic risk goes, the higher a stock's expected revenue would be. This concept also recommends the theory that investor are not rewarded for an easily removable risk. Thus The model of capital assets' pricing is a model for predicting stock revenue which includes only one risk factor and the only concluded variable is the systematic risk. The usage of β and the model of capital assets' pricing is a little harder in practice. The problem starts when we want to evaluate input variables. By input variables we mean risk free revenue rate, expected revenue rate and β. These variables can be assessed by historic data. Problems such as determining the risk free revenue rate and which portfolio represents the market make the process more complicated. The β calculated by market model is an appraisal from the real β. Thus some researchers present some modifications on appraised β, allowing for market situations. During the last decade there has been a lot of debate over β's credibility. The first study to question this was carried out by Fama and French[12]. The results showed that β itself cannot determine securities'' behavior.

Literature of earlier studies: Imam and Malik[13] did a similar research in Bangladesh. They surveyed the relationship between ownership composition as a criterion to measure corporate governance and corporate performance and stock sharing policies. Their sample included 201 firms for a 3 years period from 2001 to 2003 and used multivariable regression for analysis. The results showed that corporate ownership has a positive influence on corporate performance and concentration of managerial ownership has a negative and meaningful influence on stock sharing policies.

AL-Najjar[14] in a study in Jordan for non-financial firms surveyed the ownership structure and corporate governance. The results show institutional Jordanian investors consider factors such as capital structure, profitability, business risk, asset structure, asset liquidity and size, when deciding about investments. Generally institutional investors in Jordan prefer investing in service providing firms rather than producing ones. It is then emphasized that that study didn't confirm a relationship between stock sharing policies and institutional investors.

Jiraporn et al[15] surveyed the quality of corporate governance influence on capital structure. Their findings show a reverse relationship between corporate governance and the amount of leverage ratio meaning that the more the quality of governance, the less the leverage ratio. There is also a meaningful relationship between capital structure and corporate governance.

Material and methods

Research hypotheses: The 1st main hypothesis: There is a meaningful relationship between corporate governance mechanisms and Cost of Equity Capital.

Sub-hypotheses of the 1st main hypothesis: There is a meaningful relationship between Institutional stock ownership and capital cost of common stock. There is a meaningful relationship between Institutional stock ownership and capital cost of retained earnings. There is a meaningful relationship between Institutional stock ownership and cost of debts. There is a meaningful relationship between managerial ownership and capital cost of common stock. There is a meaningful relationship between managerial ownership and capital cost of retained earnings. There is a meaningful relationship between managerial ownership and cost of debts. There is a meaningful relationship between domestic ownership and capital cost of common stock. There is a meaningful relationship between domestic ownership and capital cost of retained earnings. There is a meaningful relationship between domestic ownership and cost of debts. There is a meaningful relationship between ownership concentration and capital cost of common stock. There is a meaningful relationship between ownership concentration and capital cost of retained earnings. There is a meaningful relationship between ownership concentration and cost of debts. There is a meaningful relationship between non-staff members' percentage and capital cost of common stock. There is a meaningful relationship between non-staff members' percentage and capital cost of retained earnings. There is a meaningful relationship between non-staff members' percentage and cost of debts. There is a meaningful relationship between CEO duality and capital cost of common stock. There is a meaningful relationship between CEO duality and capital cost of retained earnings. There is a meaningful relationship between CEO duality and cost of debts. The 2nd mainhypothesis: There is a meaningful relationship between corporate governance mechanisms and systematic risk.

Sub-hypotheses of the 2nd main hypothesis: There is a meaningful relationship between Institutional stock ownership and systematic risk. There is a meaningful relationship between managerial ownership and systematic risk. There is a meaningful relationship between domestic ownership and systematic risk. There is a meaningful relationship between ownership concentration and systematic risk. There is a meaningful relationship between non-staff members' percentage and systematic risk. There is a meaningful relationship between CEO duality and systematic risk.

Statistical population and samples: Current study's population consists of all the corporations that have been accepted in Tehran's stock exchange by April 2011that were 510 firms. Sample volume is chosen through systematic elimination method and based on the following criteria:

Their financial period was supposed to have finished by March 2011 to increase comparability. They were supposed not to have change of financial year or operation stoppage from 2001 to 2011. Bills and notations of the main firm in the mentioned period must be available. Bills and notations of the main firm in control period must be separate from the ones of the incorporated firm.

Book value of their equity in control period must not be negative. The chosen firm must not be an investing firm. The firms must be profitable. The desired firm must be working and its stock must be traded during the study period. And finally through the elimination method and after omission of remote values the size of sample was figured 81 firms.

Methodology

Regression model for surveying the 1stmainhypothesis: Regression equation for surveying the relationship betweencorporate governance mechanisms and Cost of Equity Capital is as follows: Cost of Capital $_{i,t}$= α_0+ α_1Insown$_{i,t}$+ α_2Mown$_{i,t}$+ α_3Fown$_{i,t}$+ α_4Cown$_{i,t}$ + α_5Non executive directors $_{i,t}$+ α_6CEO duality $_{i,t}$+ α_7LEV$_{i,t}$+ α_8Size$_{i,t}$+ α_9Industry$_{i,t}$ + $\varepsilon_{i,t}$ (i) resembles studied firms, (t) resembles year, ($\varepsilon_{i,t}$) resembles regression equity error.

Dependent variable: Cost of Capital $_{i,t}$ Independent variable: Institutional ownership (Insown$_{i,t}$): percentage of the stock kept by governmental and administrative firms from the whole capital stock Managerial ownership (Mown$_{i,t}$): percentage of the stock kept by board of directors' members. Domestic ownership (Fown$_{i,t}$):percentage of the stock kept by firms belonging to a specific business group Ownership concentration (OWNC): The stock belonging to mass shareholders Non-executive directors $_{i,t}$ CEO duality; in case board of directors' president is the vice-president value is 1, otherwise 0 Control variables Size: Natural logarithm of book value of all assets, Financial leverage, Type of Industry.

Regression model for surveying the 2ndmain hypothesis: Regression equation for surveying the relationship between corporate governance mechanisms and systematic risk corporate governance mechanisms and systematic risk is as follows: Systematic Risk $_{i,t}$= α_0+ α_1Insown$_{i,t}$+ α_2Mown$_{i,t}$+ α_3Fown$_{i,t}$+ α_4Cown$_{i,t}$+ α_5Non executive directors $_{i,t}$+ α_6CEO duality $_{i,t}$+ α_7LEV$_{i,t}$+ α_8Size$_{i,t}$+ α_9Industry$_{i,t}$ + $\varepsilon_{i,t}$ (i) resembles studied firms, (t) resembles year, ($\varepsilon_{i,t}$) resembles regression equity error Dependent variable: Cost of Capital $_{i,t}$ Independent variable:

Institutional ownership ($Insown_{i,t}$): percentage of the stock kept by governmental and administrative firms from the whole capital stock Managerial ownership ($Mown_{i,t}$): percentage of the stock kept by board of directors' members. Domestic ownership ($Fown_{i,t}$):percentage of the stock kept by firms belonging to a specific business group Ownership concentration (OWNC): the stock belonging to mass shareholders Non-executive directors $_{i,t}$ CEO duality; in case board of directors' president is the vice-president value is 1, otherwise 0 Control variables Size: Natural logarithm of book value of all assets Financial leverage Type of Industry

Determination of the proper model for regression evaluation: Chow test: The results of F test for the regression model of this research is displayed in table1 below. This table shows F Statistics equals 12.5147 with 99% confidence level; so we can conclude that for all the years studied hypothesis 0 to the effect that all intercepts are equal has been rejected.

The results of chow test about 1st main hypothesis show disapproval of H_0 hypothesis (incorporated model). In other words there are individual or group effects and it is needed to use panels to evaluate the regression model. Next we are going to determine the type of panel model using the Hausman test.

The results of chow test about 2nd. 3rd (1st main hypothesis)and 4th (2nd main hypothesis) models show approval of H_0 hypothesis (incorporated model). In other words there are no individuals or groups and it isn't needed to use the incorporated data method and not the Hausman test.

Hausman test: After the determining thatintercept differ for different years, the method to assess the model should be identified and due to this, the Hausman test is used.

In Hausman test H_0 hypothesis based on consistency of estimates of the random effects is tested versus H_1 hypothesis based on inconsistency of estimates of the random effects.

The results of the Hausman test have been shown in table 4-5. χ^2 statistics for the 1st model was calculated 156.071 that is at the Significance level of 99% and approves H_1 hypothesis, so based on the Hausman test the fitting of 1st regression model using panel data with the method of fixed effects would be proper.

Hypotheses Test

1st hypothesis: "There is a meaningful relationship between corporate governance mechanisms and Cost of Equity Capital" Sub-hypotheses1, 4, 7, 10, 13 and 16, There is a meaningful relationship between Institutional stock ownership and capital cost of common stock., There is a meaningful relationship between managerial ownership and capital cost of common stock. There is a meaningful relationship between domestic ownership and capital cost of common stock.

There is a meaningful relationship between ownership concentration and capital cost of common stock. There is a meaningful relationship between non-staff members' percentage and capital cost of common stock. There is a meaningful relationship between CEO duality and capital cost of common stock. In this study for testing 1st hypothesis this regression model was used: Cost of Capital $_{i,t}= \alpha_0+ \alpha_1 Insown_{i,t}+ \alpha_2 Mown_{i,t}+ \alpha_3 Fown_{i,t}+ \alpha_4 Cown_{i,t} + \alpha_5$Non executive directors $_{i,t}+ \alpha_6$CEO duality $_{i,t} + \alpha_7 LEV_{i,t}+ \alpha_8 Size_{i,t}+ \alpha_9 Industry_{i,t} + \varepsilon_{i,t}$

Table-1
Chow test

Regression model	F test	F statistics	probability	Test result
1st model- 1st main hypothesis	value	2642.621**	0.0000	Hypothesis 0 rejected
2nd model- 2nd main hypothesis	value	1.076	0.345	Hypothesis 0 confirmed
3rd model- 3rd main hypothesis	value	2.23	0.258	Hypothesis 0 confirmed
4th model- 4th main hypothesis	value	1.197	0.318	Hypothesis 0 confirmed

Confidence level: 99%

Table-2
The Hausman test

Regression model	Hausman test	χ^2 Statistics	probability	Test result
1st model(1stmain hypothesis)	value	156.071**	0.0000	Hypothesis 0 rejected

Significance level: 99%

In the formula above cost of capital resembles common stock cost, retained earnings and cost of debt and as it follows proportionate to each sub-hypothesis we use common stock cost, retained earnings and cost of debt.

After testing the regression hypotheses and making sure of their appliance, the results of regression equity fitting have been presented in table 3. F statistics 11.276 shows the Significance of the whole mode. As illustrated below chart 3, determination coefficient and modified determination coefficient for this model are in order 64.2% and 61.7%. So it can be concluded that in this regression equity only about 61% of changes of common stock cost is controlled by independent and control variables.

In this table numbers in Value column show the quality and direction of each variable's influence on abnormal revenue of the studied firms as positive shows a direct and negative a reverse influence.

Bearing in mind the information in table-3, it can be inferred that in the above equity, variables Insown Mown Fown and OWNC haven't been meaningful in 95% level of confidence whereas other variables are meaningful.

Test result: As shown in table 3, significance level of institutional ownership is 0.286, which is more than the desired significance level in this study (5%), absolute value of t statistics here is 1.073 which is smaller than t statistics with the same freedom degree. So in 95% significance the resulting coefficient for the above variable in the regression model isn't meaningful.

Significance level of managerial ownership equals 0.402 which is more than 5%. absolute value of t statistics here is 0.838 which is smaller than t statistics with the same freedom degree. So in 95% significance the resulting coefficient for the above variable in the regression model isn't meaningful.

Significance level of domestic ownership is 0.561, which is more than the desired significance level in this study (5%), absolute value of t statistics here is 0.588 which is smaller than t statistics with the same freedom degree. So in 95% significance the resulting coefficient for the above variable in the regression model isn't meaningful. According to table 3 it can be inferred that sub-hypotheses 1,4,7 and 10 have been rejected and sub-hypotheses 13 and 16 are confirmed.

Sub-hypotheses 2,5,8,11,14 and 17: There is a meaningful relationship between Institutional stock ownership and capital cost of retained earnings. There is a meaningful relationship between managerial ownership and capital cost of retained earnings. There is a meaningful relationship between domestic ownership and capital cost of retained earnings. There is a meaningful relationship between ownership concentration and capital cost of retained earnings.

There is a meaningful relationship between non-staff members' percentage and capital cost of retained earnings.

There is a meaningful relationship between CEO duality and capital cost of retained earnings. After making sure of the appliance of regression hypotheses, we present the results of regression equity fitting in table 4. F statistics value is 17.154 that shows the significance of regression model. As shown below table-4 coefficient of determination and modified determination coefficient are by order 52.6% and 49.8%. so it can be concluded that in the current regression model only about 49.8% of the changes in cost of retained earnings in studied firms is explained by independent and control variables. In this table numbers in Value column show the quality and direction of each variable's influence on abnormal revenue of the studied firms as positive shows a direct and negative a reverse influence. According to the above explanations it can be said that in the above equity variables Insown, Mown and Fown are not meaningful in significance level of 95% while others are.

Table-3
Results of regression fitting

Cost of Capital $_{i,t}= \alpha_0+ \alpha_1 Insown_{i,t}+ \alpha_2 Mown_{i,t}+ \alpha_3 Fown_{i,t}+ \alpha_4 Cown_{i,t} + \alpha_5$Non executive directors $_{i,t}+ \alpha_6$CEO duality $_{i,t} + \alpha_7 LEV_{i,t}+ \alpha_8 Size_{i,t}+ \alpha_9 Industry_{i,t} + \varepsilon_{i,t}$					
Variable name	**Coefficient**	**Coefficient value**	**T statistics**	**P-Value**	**Hypothesis test result**
Fixed value	α_0	1.522	2.873	0.004	No case
Insown	α_1	0.234	1.073	0.286	Sub-hypothesis 1 rejected
Mown	α_2	0.477	0.838	0.402	Sub-hypothesis 4 rejected
Fown	α_3	0.641	0.558	0.561	Sub-hypothesis 7 rejected
OWNC	α_4	1.21	0.158	0.875	Sub-hypothesis 10 rejected
Non-executive directors	α_5	-0.311	2.987	0.0037	Sub-hypothesis 13 rejected
CEO duality	α_6	-1.241	2.847	0.014	Sub-hypothesis 16 rejected
SIZE	α_7	-0.121	1.991	0.047	No case
LEV		0.412	2.921	0.0037	No case
Determination coefficient		0.642		F statistics	11.276
Modified determination coefficient		0.617		P-Value	0.000
				Durbin Watson statistics	1.925

Table-4
Results of regression fitting

Cost of Capital $_{i,t}$= α_0+ α_1Insown$_{i,t}$+ α_2Mown$_{i,t}$+ α_3Fown$_{i,t}$+ α_4Cown$_{i,t}$ + α_5Non executive directors $_{i,t}$+ α_6CEO duality $_{i,t}$ + α_7LEV$_{i,t}$+ α_8Size$_{i,t}$+ α_9Industry$_{i,t}$ + $\varepsilon_{i,t}$					
Variable name	**Coefficient**	**Coefficient value**	**T statistics**	**P-Value**	**Hypothesis test result**
Fixed value	α_0	1.522	2.873	0.004	No case
Insown	α_1	0.234	-0.294	0.764	Sub-hypothesis 2 rejected
Mown	α_2	0.477	-1.054	0.292	Sub-hypothesis 5 rejected
Fown	α_3	0.641	1.129	0.259	Sub-hypothesis 8rejected
OWNC	α_4	2.013	-2.231	0.026	Sub-hypothesis 11confirmed
Non-executive directors	α_5	-0.381	2.023	0.044	Sub-hypothesis 14confirmed
CEO duality	α_6	-0.578	16.69	0.000	Sub-hypothesis 17confirmed
SIZE	α_7	-0.421	2.182	0.046	No case
LEV	α_8	-0.271	2.218	0.0293	No case
Determination coefficient		0.526		F statistics	17.154
				P-Value	0.000
Modified determination coefficient		0.498		Durbin Watson statistics	1.781

Test result: As shown in table 4, significance level of institutional ownership is 0.764, which is more than the desired significance level in this study (5%), absolute value of t statistics here is (0.294) which is smaller than t statistics with the same freedom degree. So in 95% significance the resulting coefficient for the above variable in the regression model isn't meaningful.

Significance level of managerial ownership equals 0.292 which is more than 5%. absolute value of t statistics here is 1.054 which is smaller than t statistics with the same freedom degree. So in 95% significance the resulting coefficient for the above variable in the regression model isn't meaningful.

Significance level of domestic ownership (Fown) is 0.259, which is more than the desired significance level in this study (5%), absolute value of t statistics here is 0.1.29 which is smaller than t statistics with the same freedom degree. So in 95% significance the resulting coefficient for the above variable in the regression model isn't meaningful. According to table 4 it can be inferred that sub-hypotheses 2, 5and 8 have been rejected and sub-hypotheses 11, 14 and 17 are confirmed.

Sub-hypotheses 3,6,9,12,15 and 18: There is a meaningful relationship between Institutional stock ownership and cost of debts. There is a meaningful relationship between managerial ownership and cost of debts. There is a meaningful relationship between domestic ownership and cost of debts. There is a meaningful relationship between ownership concentration and cost of debts. There is a meaningful relationship between non-staff members' percentage and cost of debts. There is a meaningful relationship between CEO duality and cost of debts.

As we make sure of the appliance of regression hypotheses, we present the results of regression equity fitting in table-5. F statistics value is 21.689 that show the significance of regression model. As shown below table-5 coefficient of determination and modified determination coefficient are by order 69.1% and 65.5%. so it can be concluded that in the current regression model only about 65.5% of the changes in cost of debt in studied firms is explained by independent and control variables. In this table numbers in Value column show the quality and direction of each variable's influence on abnormal revenue of the studied firms as positive shows a direct and negative a reverse influence. According to the above explanations it can be said that in the above equity variables Insown, Mown, Fown ، OWNC, and Non-executive director's and CEO duality are not meaningful in significance level of 95% while others are.

Test result: based on table 5 it can be concluded that sub-hypotheses 3, 6, 9, 12, 15, 18 are not confirmed.

The 2nd main hypothesis: There is a meaningful relationship between corporate governance mechanisms and systematic risk.

Sub-hypotheses 1 to 6: There is a meaningful relationship between Institutional stock ownership and systematic risk. There is a meaningful relationship between managerial ownership and systematic risk. There is a meaningful relationship between domestic ownership and systematic risk. There is a meaningful relationship between ownership concentration and systematic risk. There is a meaningful relationship between non-staff members' percentage and systematic risk. There is a meaningful relationship between CEO duality and systematic risk. In this study for testing

2nd hypothesis this regression model was used: Systematic Risk $_{i,t}= \alpha_0+ \alpha_1 Insown_{i,t}+ \alpha_2 Mown_{i,t}+ \alpha_3 Fown_{i,t}+ \alpha_4 Cown_{i,t} + \alpha_5$Non executive directors $_{i,t}+ \alpha_6$CEO duality $_{i,t} + \alpha_7 LEV_{i,t}+ \alpha_8 Size_{i,t}+ \alpha_9 Industry_{i,t} + \varepsilon_{i,t}$

After making sure of the appliance of regression hypotheses, we present the results of regression equity fitting in table-6. F statistics value is 18.636 that shows the significance of regression model. As shown below chart 6 coefficient of determination and modified determination coefficient are by order 72.1% and 68.3%. so it can be concluded that in the current regression model only about 68.3% of the changes in systematic risk in studied firms is explained by independent and control variables. In this table numbers in Value column show the quality and direction of each variable's influence on abnormal revenue of the studied firms as positive shows a direct and negative a reverse influence.

According to the above explanations it can be said that in the above equity variables Insown, Mown, Non-executive directors and CEO duality are not meaningful in significance level of 95% while others are.

Test result: based on table 6 it can be concluded that sub-hypotheses 3, and 4 are confirmed and sub-hypotheses 1, 2, 5 and 6 are not confirmed.

Table-5
Results of regression fitting

Cost of Capital $_{i,t}= \alpha_0+ \alpha_1 Insown_{i,t}+ \alpha_2 Mown_{i,t}+ \alpha_3 Fown_{i,t}+ \alpha_4 Cown_{i,t} + \alpha_5$Non executive directors $_{i,t}+ \alpha_6$CEO duality $_{i,t} + \alpha_7 LEV_{i,t}+ \alpha_8 Size_{i,t}+ \alpha_9 Industry_{i,t} + \varepsilon_{i,t}$

Variable name	Coefficient	Coefficient value	T statistics	P-Value	Hypothesis test result
Fixed value	α_0	1/813	6.1032	0.000	No case
Insown	α_1	0.526	0.188	0.851	Sub-hypothesis 3 rejected
Mown	α_2	0.727	0.113	0.91	Sub-hypothesis 6 rejected
Fown	α_3	1.131	-1.5	0.134	Sub-hypothesis 9 rejected
OWNC	α_4	0.326	-0.294	0.769	Sub-hypothesis 12rejected
Non-executive directors	α_5	-0.421	1.894	0.0588	Sub-hypothesis 15rejected
CEO duality	α_6	0.527	0.8388	0.421	Sub-hypothesis 18rejected
SIZE	α_7	-0.271	2.218	0.0293	No case
LEV	α_8	0.538	-3.016	0.0027	No case
Determination coefficient		0.691		F statistics	21.689
				P-Value	0.000
Modified determination coefficient		0.655		Durbin Watson statistics	2.435

Table-6
Results of regression fitting

Systematic Risk $_{i,t}= \alpha_0+ \alpha_1 Insown_{i,t}+ \alpha_2 Mown_{i,t}+ \alpha_3 Fown_{i,t}+ \alpha_4 Cown_{i,t} + \alpha_5$Non executive directors $_{i,t}+ \alpha_6$CEO duality $_{i,t} + \alpha_7 LEV_{i,t}+ \alpha_8 Size_{i,t}+ \alpha_9 Industry_{i,t} + \varepsilon_{i,t}$

Variable name	Coefficient	Coefficient value	T statistics	P-Value	Hypothesis test result
Fixed value	α_0	1/12	5.5074	0.000	No case
Insown	α_1	-0.102	-1.054	0.292	Sub-hypothesis 1 rejected
Mown	α_2	0.715	-1.238	0.068	Sub-hypothesis 2 rejected
Fown	α_3	0.471	2.843	0.005	Sub-hypothesis 3confirmed
OWNC	α_4	0.248	2.871	0.004	Sub-hypothesis 4 confirmed
Non-executive directors	α_5	0.161	1.118	0.086	Sub-hypothesis 5rejected
CEO duality	α_6	-0.125	-0.705	0.4809	Sub-hypothesis 6rejected
SIZE	α_7	-0.215	2.380	0.018	No case
LEV	α_8	0.367	-2.619	0.009	No case
Determination coefficient		0.721		F statistics	18.636
Modified determination coefficient		0.683		P-Value	0.000
				Durbin Watson statistics	2.521

Conclusion

The results of this study show that among all variables only ownership concentration, non-staff members' percentage and CEO duality have a meaningful relationship with capital cost of retained earnings while influencing factors on capital cost of common stock included on-staff members' percentage and CEO duality. Though fitting regression models in error level of 0.05 of significance have been evaluated and show significance and relationship between corporate governance mechanisms and cost of capital to confirm the study's hypothesis. This research's findings match with thoseofImam and Malik[13] and aren't aligning with those of AL-Najjar[14]. The fitting results of the 2nd regression model showed that only variables domestic ownership and ownership concentration have a meaningful relationship with systematic risk that is aligning with the findings of Jiraporn et al [15] because the fitted regression model was evaluated in .01 type error level of significance and confirmed a meaningful relationship between governance mechanisms and systematic risk of firms.

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