

Board Size, CEO Duality and Choice of Debt Financing: Evidence from KSE 100 Index Firms of Pakistan

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Abstract:

Capital structure is very important and difficult decision for the management. This basically investigates the agency cost related determinants of capital structure of KSE 100 index companies. Debt

ratio is used as the proxy of capital structure. The results of hypothesis testing indicate that board size has positive and significant impact on capital structure on the other hand CEO duality has negative but significant impact on capital structure of sample firms. So the study conclude that firms with larger boards have easy and cheap access to external funds therefore firms used debt to finance their projects rather go for internal financing. On the other hand CEO duality is negatively related to capital structure. A possible explanation for relation in the context of Pakistan is that mostly firms are owned by families there also exist duality in leadership so they choose more debt financing over equity financing because they don't want to dilute their ownership

Key words: KSE 100 index, Corporate Governance, Board Size, CEO Duality, Capital Structure

INTRODUCTION

Capital structure is a prime source of information to understand the how companies arranged finance to run its operations with respect to growth and source of funding. Capital structure of a company normally combination of debt and equity. Management and other stakeholders take decision regarding mix of capital structure including what portion of debt and equity should be included in capital structure. Equity contains preferred stock, common stock and retained earnings.

Capital structure is a portion of a company's balance sheet which consists of debt and owner's equity. Any company needs finances to support its operations and future expansions which can be raised through capital. The claim of the outsiders on the firm's capital is called debt and the portion of capital that is provided by the owners or shareholders is called equity. These are two main sources of firm's capital structure. Different firms can use different type of capital structure and thus have varied risk bearing attitudes. There are two classes of debt one is non-current or long term debt and second is short term debt

or current debt. Short term debt is for one year and long term debt is for 5 to 10 or more years. Long term debt can magnify the firm's profitability but too much leverage may be risky in terms of principal and contractual interest payments. If capital structure involves healthy proportion of equity then it shows financial fitness of that company for the lenders. Long term debt involves bonds, long term loans and long term notes payables. Short term loan involves short term bank loans and accounts payables. Debt involves paying regular interest payments and principal when it comes due. The issuance of long term debt or short term debt depends on firm's financial strategy. Equity portion of capital structure involves common stock, preferred stock and undistributed profit or retained earnings. Common stock holders are the real owners of the company which have voting rights in company on any matter related to the company. There are no fixed dividend payments to common stock holders and their incomes involve high uncertainty. They have residual claims on the assets of the company in case of liquidation of the firm. On the other side preferred stock holders have fixed dividend payments but have no voting control over the company. They are given priority in paying dividend and bankruptcy payments. Retained earnings are undistributed profits which are put as reserves for future expending. There are different ways of calculating company's capital structure such as debt ratio is defined by the total liabilities by the total assets. Higher the debt ratio higher will be the magnification of risk due to introduction of more outside financing. This indicates more leveraged position of the firm and it is taking aggressive strategy for its growth. The second one is debt to equity ratio which is defined by the total liabilities by the total equity. From the creditors point of view the leverage ratio must be lower which shows that firm assets will be enough to pay back their lending money and face less risky investment. From the shareholders point of view profits

should be greater than the cost of debt because they receive increased earnings otherwise greater debt financing than its cost will make the firm in financial distress and can lead to bankruptcy. Thus information contained in the capital structure play pivotal role for all stakeholders of the firm. Ranti.U.O (2013) conducted a study to observe the relationship among the board size and CEO duality on the capital structure of listed firms in Nigerian. According to the findings of this research significant negative relationship between the board size and capital structure of selected listed firm, whereas significant and positive association between the CEO duality and the capital structure was observed. According to him small board size firm weaker in corporate governance and depends on more debt.

Modigliani and Miller (1958) first introduce the capital structure theory. According to them in a world of simplistic and frictionless businesses, if there is no transaction cost, no taxes and in a perfect capital market there is no relation between financial policy of the company and firm value. After their work, a lot of research has been done on this in both developed and developing countries but optimal financial mix is still unresolved. Many researchers have done work and extended the capital structure theory but a few have done work on the relationship between capital structure and corporate governance. The capital structure theories are classified into two groups: first is tax based theories and second is non-tax based theories. Bankruptcy and trade-off theories are included in tax based theories. Agency cost theory, signaling theory, transaction cost and pecking order theories are included in non-tax based theories. It is very crucial for any have that it has an appropriate capital structure because it is not only considered by the stakeholders but also important for the survival of the firm in a competitive business environment. Zwiebel (1996) concludes that financial mix of the firm is chosen by the

managers. The decision about choosing the portion debt and equity in capital structure has decisive impact on the profitability of the firm (Brealey et al. 2004). The management of capital structure curtails from the prerequisite to minimize the cost of capital for the purpose of maximizing the shareholders wealth. However the research has been unsuccessful to grasp consent to the level of capital structure at which the cost of capital will equate the paybacks added to shareholders.

A person who has economic link with the organization called stakeholders including management of the company, shareholders, employees, creditors etc. A process that creates value for all stakeholders by efficient management by the management of the company by securing the rights and obligation of each stakeholder. Corporate governance also creates a relationship of trust between the shareholders, lenders and the firm. Corporate governance is also a tool for survival, growth and stability of business. Therefore corporate governance is an important part that should be implemented in all forms of business organization.

Corporate governance is the key method to protect the all stake holders of the company including minority shareholders so that large shareholders may not expropriate their wealth. A lot of work has been done in the field of corporate governance both at international and national levels which shows its importance in the recent days (the code corporate governance best practices). Corporate governance structure in a country has direct impact on the economy and growth of any country because these practices make the companies to perform better, attract investments and mitigate risk for the investors. According to the Shleifer & Vishny (1997) main focus of corporate governance is building a trust worthy relationship with the stakeholders. Corporate governance is the prime rules to protect the right of all stakeholders of the firms. La Porta et al. (2000) define as rules and regulation by these

investors and stakeholders secure themselves from the expropriation of insiders. Agency issue can be eliminated and avoided through the corporate governance. An extensive review of literature discloses that the previous studies on this dimension of finance were from the developed economies though the same cannot be true for the 3rd world countries or developing economies. Mostly studies on this area were to investigate the impact of governance on the firm performance and others to know the effect of governance on firm value. So this study explores the impact of CEO duality and Board size on the capital structure of the KSE 100 index firms.

LITERATURE REVIEW

Board Size and Capital Structure

Maximum board size in Pakistan is nineteen and minimum board size is seven. Proper management of company and corporate governance based on the board of management of the company as the capital structure is being finalized by the board of management. According to Pfeffer and Salancick (1978) capital structure has positive and significant influence on capital structure of the company. Berger (1997) mentioned that gearing level depends upon the size of board, large size of board tends to low gearing and low board size tends to high gearing. He also mentioned that large size of board empathizes on low debt and small size of board maintain large amount of debt in capital structure. According to Abor and Biekpe (2007) concluded that board size and leverage having inverse relation and majority of SMEs that having large board size also facing low gearing level. Wen (2002) mentioned that board size and capital structure are positive correlated with each other. According to him consensus on any issue is impossible in case of large board size that resulting poor governance and ultimately increasing the debt level in specific capital structure. Large size

of board also a source of reducing debt cost because lending agency assume that large size of boards tends to strict and efficient management.

Success of an organization based on the efficiency and effectiveness of board of management. Large board size in a company accountable for all decision that increase the growth of a firm. Coles et al. (2008) mentioned that positive and significant relationship between the board size and capital structure was observed in America. According to him large advertising is required for high gearing ratio firms whereas low gearing ratio does not required any types of advertisement. According to Anderson et al. (2004) high board size firms can easily arrange debts in favorable terms and conditions. According to agency theory of Jansen (1986) and Wen et al. (2002) size of board and capital structure having positive and significant relationship with each other. According to them high gearing ratio leads to growth, stability and survival of firms as large size ensured strict monitoring. Wen (2002) mentioned that capital structure and board size positively correlated with each other. He also mentioned that due to large board size no early consensus is possible on any decision that ultimately affects to the governance that resulting high debt level. Large board size leads to low debt cost as creditors feel more confidence and trust due to large size of board.

H₁: If other things held constant Board Size has a significant impact on capital structure of KSE 100 index firms

CEO Duality and Capital Structure

In a modern corporate governance CEO is a duality variable. A CEO is also a chairman of the company that also creating agency problems. Capital structure or mix is directly affected by the CEO. According to Fama and Jensen (1983) decision control

function is separated from the decision management function. Starting and implementing new proposals and decision control function including approving and monitoring such proposals. The separate role of CEO also creates agency cost issues. Fosberg (2004) an organization where the chairman and CEO role independent that leads to optimal capital structure that types of firms also shows high leverage.

Nazir et al. (2012) examined the impact of CEO duality on capital structure by using the data of 269 financial firms that are listed at Karachi Stock Exchange from the period 2004 to 2009. Effect of default eliminated, and data was trim at 5%. Generalized regression mode was used to observe the CEO duality and leverage of the firm. According to the results of the study positive and significant relationship with leverage of the firm and leverage but an indirect relationship was also observed with the tangibility.

CEO duality is the one of the most debated topics in corporate governance. According to the Jensen & Meckling (19976) and Fama & Jensen (1983) negative impact of CEO duality was observed but according the advocates of the stewardship theory observed positive and significant relationship on capital structure. Fosberg (2004) conducted a study to observe the impact of corporate governance on capital structure. He observed positive and significant relationship between the CEO duality and gearing level. He also presented the explanation of this positive relationship, he said leadership duality decrease the issues of separation of ownership and control and resulting more confidence on lending agency resulting assurance of debts on favorable terms and conditions. Faleye (2004) also observe positive relationship between the CEO duality and capital structure. According to him duality in leadership decreasing the problems of information asymmetry resulting easy access to the external financial resources. Above

(2007) also reported positive relationship with capital structure and dual leadership.

H₂: If other things held constant CEO duality has a significant impact on capital structure of KSE 100 index firms

DATA & METHODOLOGY

Sample and Sample Size

In this study, it includes local firms of Pakistan listed in Karachi Stock Market (KSE) which is the biggest stock market of the country called as KSE 100 index. This research covers the period from 2011 to 2014 which involves most recently published information by the companies. This period of four years was selected because it is latest and this period is showing the developments in growing capital market of Pakistan. During this period new concept in modern firms called as corporate governance is being appreciated by the companies of Pakistan. The selected period and firms are chosen unbiased.

- KSE 100 index consist of 100 companies
- Out of 100 companies 24 are related to financial sector, 76 companies are related to none-financial sector
- This study includes the four year data of 56 firms out of 76 none financial firms, 20 firms are excluded due to the unavailability of data.
- So out of 304 observations of 76 firms this study includes 224 observations of 56 firms

Data

Secondary data is used in this study that is collected from the annual reports of the respected firms. Annual reports were

collected from different sources like the official website of the firm and from the KSE official website.

Data Analysis techniques

After collecting and arranging the data E-views⁷ is used to analyze the data. Pooled OLS is used to investigate the impact of board size and CEO duality on capital structure of the KSE listed firms.

Variables

Dependent Variable

In this study capital structure is taken as dependent variables. In various study different meaning of capital structure was taken, for instance in some study total dividend divided by total assets (Eduardo J. Menendez Alonso and Silvia, Gomez Anson, 2003). Arshad, Hasan, Safdar Ali Butt, 2009) taken debt to equity ratio. Zou and Xiao (2006) taken long term debt dividend by total assets. In this study, total debt to total assets was taken as capital structure. Total debts including all the liabilities like short term debt, long term debt and any other debts from relatives and friends. Whereas in liabilities and owner equity part of the balance sheet all liabilities excluding owner equity are taken as total debt. Definition of capital structure used in this study also used by (Eduardo J. Menendez Alonso and Silvia Gomez Anson, 2003, Wellalage and Locke, 2014 and Masood, 2014).

Independent Variables

According to Ahmad et. (2012) board size is the total number of members of the board that are disclosed in the annual report of company. In this study CEO has been taken as dummy variable. 1 is taken if CEO also chairs the board otherwise it is

taken as 0. This definition is also taken by (Hassan and Butt, 2009).

Control Variables

This study was conducted to test the effect of ownership structure and governance on capital structures of the registered companies. There are also some other variables that having significant effect on final results of the study, these above mentioned variables are necessary to fix as control variables in the analysis. Therefore these variables cannot pollute the results. Firm size, profitability, assets tangibility and liquidity was taken as control variables in this study.

Model Specification

$$\text{CAPITALSTRUCTURE}=\alpha+\beta_1 \text{CEOD}+\beta_2 \text{BSIZE} +\text{K}+\mu$$

α = Represented Constant

β = Beta Coefficients

BSIZE= Board Size

CEOD=CEO Duality

K=Control Variable

μ = Error Term

RESULTS & DISCUSSION

Descriptive Statistics

	BOARD SIZE	CEO DUALITY	ASSETS TANGIBILITY	PROFITABILITY	LIQUIDITY	FIRM_SIZE
Mean	8.62053	0.125	42.35307	14.96429	2.34828	7.81164
Median	8	0	39.93228	13.95831	1.38883	7.46941
Maximum	16	1	152.1389	46.23451	150.145	10.5945
Minimum	6	0	0.120688	-24.55145	0.04621	6.14933
Std. Dev.	1.87351	0.33146	25.11247	10.39242	9.98767	1.16134
Sum	1931	28	9487.088	3352.001	526.0168	1749.809
Sum Sq. Dev.	782.745	24.5	140631.9	24084.51	22245.05	300.7638
Observations	224	224	224	224	224	224

Hassan Ahmad, Tariq Siddiq, Zahid Iqbal, Furqan Ahmed, Nasreen Akhter- **Board Size, CEO Duality and Choice of Debt Financing: Evidence from KSE 100 Index Firms of Pakistan**

Pooled OLS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.149078	0.130806	-1.139686	0.2557
BOARD_SIZE	0.026726	0.007645	3.495752	0.0006
CEO_DUALITY	-0.024993	0.042592	-0.586786	0.5580
ASSETS_TANGIBILITY	0.001795	0.000541	3.314200	0.0011
PROFITABILITY	-0.002766	0.001323	-2.089992	0.0378
LIQUIDITY	-0.004244	0.001356	-3.129263	0.0020
FIRM_SIZE	0.049155	0.012170	4.038918	0.0001
R-squared	0.211404	Mean dependent var		0.486821
Adjusted R-squared	0.189600	S.D. dependent var		0.222249
S.E. of regression	0.200074	Akaike info criterion		-0.349509
Sum squared resid	8.686414	Schwarz criterion		-0.242895
Log likelihood	46.14498	Hannan-Quinn criter.		-0.306474
F-statistic	9.695446	Durbin-Watson stat		0.623443
Prob(F-statistic)	0.000000			

Test for Heteroskedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	3.611238	Prob. F(6,217)	0.0020
Obs*R-squared	20.33585	Prob. Chi-Square(6)	0.0024
Scaled explained SS	18.33151	Prob. Chi-Square(6)	0.0055

This is Breusch-Pagan-Godfrey test for Heteroskedasticity. Probabilities show that there exist Heteroskedasticity in data. So to control the problem of Heteroskedasticity ML - ARCH (Marquardt) - Normal distribution test is used. This following table showing the results of ML - ARCH (Marquardt) - Normal distribution test.

Results after Controlling

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.033571	0.080173	-0.418734	0.6754
BOARD_SIZE	0.025702	0.004808	5.345629	0.0000
CEO_DUALITY	-0.106012	0.024626	-4.304886	0.0000
ASSETS_TANGIBILITY	0.001812	0.000365	4.959361	0.0000

Hassan Ahmad, Tariq Siddiq, Zahid Iqbal, Furqan Ahmed, Nasreen Akhter- **Board Size, CEO Duality and Choice of Debt Financing: Evidence from KSE 100 Index Firms of Pakistan**

PROFITABILITY	-0.003859	0.000723	-5.339164	0.0000
LIQUIDITY	-0.005837	0.001462	-3.992730	0.0001
FIRM_SIZE	0.041499	0.007296	5.687532	0.0000
Variance Equation				
C	0.006316	0.001827	3.457499	0.0005
RESID(-1)^2	0.989356	0.218348	4.531095	0.0000
GARCH(-1)	0.038763	0.058378	0.663993	0.5067
R-squared	0.180933	Mean dependent var	0.486821	
Adjusted R-squared	0.158286	S.D. dependent var	0.222249	
S.E. of regression	0.203903	Akaike info criterion	-0.640104	
Sum squared resid	9.022060	Schwarz criterion	-0.487799	
Log likelihood	81.69169	Hannan-Quinn criter.	-0.578626	
Durbin-Watson stat	0.610291			

In above mentioned results positive relationship between the board size and debt ratio was observed. According to the coefficient 1% change in the board size resulting 2.5% change in capital structure at 0.0000 levels that is the highly significant relationship. According to the findings of the study large companies having large debt ration and large board size and such companies takes its most of assets on debts at favorable terms and conditions. Wen (2002) mentioned that a positive relationship between the capital structure and board size was observed. He further added that high gearing level resulting due to the large board size and also leads to increasing the firm's value. He also mentioned that an early consensus on any decision is not possible in case of large board size that resulting poor governance and high debt level. According to him large board size also leads to low cost of debt because the creditors think that firms is working under strict supervision and efficient management. According to Coles et al. (2008) a positive relationship between board size and capital structure was observed in America. He further added that high gearing ratio required large advising requirements then the low gearing levels firms. Anderson et al. (2004) direct relationship between

the board size and debt ratio was found. He also urges that firm with large size of board having easy access to the lending agencies at favorable terms and conditions. According to Jansen (1986) and Wen et al. (2002) with reference to agency theory they added that there is a positive relationship between the size of board and gearing ratio. According to them large size of boards are more efficient as compare to low size board with reference to gearing ratio and capital structure. He mentioned that firm with large size of board enjoyed more growth as compare to low size of board organization.

In this study negative and significant relationship between the CEO duality and debt ratio was observed. According to the coefficient of the CEO10% change was observed in capital structure by changing 1% change in CEO duality and this relationship is highly significant at 1% level. According to the results of this study lower debts usage linked with CEO duality. The debt ratio will be lower if the CEO also working as chairman of the board. As per Abor and Biekpe (2007) chair duality and combination of board is positively related to the capital structure. According to Fosberg (2004) CEO gearing level and CEO duality have positive relation with each other. According to him leadership duality decreases the issues of separation of ownership and control and finally resulting higher accessibility to the lending institution under favorable terms and conditions.

Like the Fosberg(2004), Faleye (2004) also reports the positive relationship between CEO duality and capital structure, he provide the explanation for this relationship that Duality in leadership may lessens the problem of information asymmetry in turn this leads to higher access to external finance. A positive relationship between dual leadership and capital structure also reported by the Abor(2007). A possible explanation for relation in the context of Pakistan is that mostly firms are owned by families there also exist duality in

leadership so they choose more debt financing over equity financing because they want to dilute their ownership.

CONCLUSION

Capital structure is the key decision for management as the financial performance and position of firms depends upon the decision making with reference to capital structure. This study basically investigates the agency cost with reference to capital structures of companies registered in KSE 100 index. In this study debt ratio is used as proxy of capital structure. According to the results of the study board size having significant and positive relationship with capital structure whereas CEO duality having negative but significant impact on capital structure of sample firms. Finally it is observed that firms with large board size have more access to the lending institution as compare to minimum board size member company therefore large size board firm used more debt financing as compare to internal financing. On the other hand CEO duality having negatively related to capital structure.

This study limited to only two variables of corporate governance. Other dimensions of corporate governance like the ownership related dimensions could be used to explore the complete relationship of corporate governance mechanism and capital structure with long term data.

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