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Interrelationship among Capital Structure, Corporate Governance Measures and Firm Value: Panel Study from Pakistan

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Abstract

The aim of the study is to test most discussed relationship between capital structure and firm value. This research also investigated the impact of corporate governance measures on firm value and impact of capital structure on corporate governance measures. The study used the 775 firm year observations of 155 non-financial companies listed at Karachi Stock Exchange for financial years containing 2008 to 2012. Keeping in view the nature of data (balanced panel), fixed effects regression method is employed to estimate the formulated relationships. For first relationship of interest (impact of capital structure on firm value) the study found significant positive impact, but in case of corporate governance, only board independence and ownership concentration measures are found affecting firm value significant with positive sign. For third relationship i.e., impact of leverage on governance measures, this study found no significant affects.

Key words: capital structure, corporate governance measures, firm value, non-financial firms, Karachi stock exchange.

1. Introduction

The nature of the firm by Coase (1937) is a seminal paper to discuss the reasons for existence of firm. He introduced the concept of transaction cost and explained why firms exist, why firm is better than market alternative. However paper also shed some light on the transaction cost of using firm, these cost as Coase (1937) quoted were increasing fixed cost, and increasing tendency for an overwhelmed manager to make inaccurate decision in funds allocation. To reduce this countervailing cost corporate governance plays a substantial role. Jensen & Meckling (1976) explained the agency problem in a firm and related costs. To reduce this agency cost (transaction cost) there is need of some

control mechanism; or else returns to the entrepreneur function will be diminishing with the increase in this cost.

The issue of capital structure is still unresolved. It is one of the most multifaceted areas of financial decision making because of its interrelationship with other financial decisions. The financial decisions associated with optimal blend of debt and equity hold a lot of significance for all business concerns. A public firm raises money to finance its operations by issuing debt and equity, mix of these different sources of capital is referred to capital structure. Long scholastic debate has been occurred on this phenomenon. Famous work of noble laureates Modigliani and Miller (1958 & 1963) discussed issue of leverage and firm value extensively. Initially in their 1958 publication, they concluded with no relationship among the capital structure choice and firm value, although many conditions apply. Main assumption was no corporate taxes. They gave the arbitrage based and other proofs for their theorem. However, in 1963 they revised their work with assuming tax environment, and proposed a linear relationship among the level of debt used and firm value. It should be noted that according to this proposition optimal capital structure should be based on 99.99% debt. But with the evolution in literature this relationship got refined later by many scholars. This evolution can be summarized in the following points:

- Modigliani and Miller (1958) had first stated that they found no association between capital structure and value of the firm.
- Modigliani and Miller (1963) arrived at the contradictory conclusion that greater level of debt leads to greater firm value, and the reason is tax deductibility of interest.
- Many later studies revealed that this effect of interest tax deductibility is compensated when taking into account personal taxes (Miller, 1977), an eventual lack of tax capacity, due to the existence of economic loss, the effect of other kind of tax protection (De Angelo and Masulis, 1980), introduction of financial distress costs that can be direct as well as indirect, the crux of the above mentioned situations is that there is trade-off between costs of debt and benefits.
- Furthermore, this non-linear relation would be customized more when bearing in mind financial distress cost and agency cost (Jensen & Meckling, 1976).
- Myers and Majluf (1984) found executives' priorities when deciding about financial resources. In this scenario no best possible debt level turns out to be objectively apparent, but due to the different circumstances the manager had to face over the time. The role of managerial priorities has particularly relevant because of information asymmetries.
- There is a different theory known as Pecking order. Myers (1984) did revolutionary work on this model. It states that capital structure will be determined by firm's need to finance fresh investments, first of all internally (retained earnings), afterward with debt having low risk and lastly with equity only as a last alternative. This theory ruled out Trade-off theory.

In today's world, corporate governance has created its place in everywhere. In recent days it can be said that corporate governance has got maximum attentions of business

world. It is said that without effective corporate governance system business cannot survive for a longer time period.

Corporate governance is considered among the most discussed issues of 21st century till now. It used to gain much attention of researchers and financial press. Corporate governance described as the set of control systems that a company takes on to discourage possibly self-interested managers from indulging in actions unfavorable to the protection of stakeholders. In theory, the necessity for corporate governance based on the idea of separation of ownership from management; gives self-centered managers to take actions that align with their own interest and not with the interest of stakeholders, and they actually pay price of these actions. This situation is typically referred to as the agency problem, and the costs that results from this problem expressed as agency costs. Executives of the organization make different key decisions about operations; investment and financing that improve themselves at the cost of other related parties of the firm. To minimize agency costs, monitoring and control mechanisms are in place in companies. These systems that maintain checks and balances on the actions of management are termed as corporate governance. Monitoring system consists of board of directors to supervise management and an external auditor that convey an independent opinion on the fairness of financial statements. In most of the cases, however, corporate governance systems are affected by a much broader group of elements, including shareholders, lenders, labor unions, regulators etc. To be an effective and efficient governance system it should reduce its agency cost in comparison with implementation cost. However, the best corporate governance system in practical cannot disappear agency cost completely because implementation costs will always be greater than zero. Certain external factors influences corporate governance systems performance including Efficiency of capital market at local level, accounting standards reliability, cultural values as well as social values and the extent of legal protection provided to all shareholders including minority shareholders.

1.1 Background of Corporate Governance in Pakistan

In Pakistan corporate sector is comprised of Public limited, private limited and small and medium enterprises. After independence, companies' act 1913 was being used to regulate corporate sector. Central bank named The State bank of Pakistan (SBP) is liable to control the financial system and monitory policy. Three stock exchanges are performing the role of money and capital markets: Karachi Stock Exchange (KSE), Islamabad Stock Exchange (ISE) and Lahore Stock Exchange (LSE) for capital accumulation. To control the accounting and auditing function, Pakistan Institute of Accountants (PIA) was initially working as private organization; however in 1962 Institute of Chartered Accountants of Pakistan (ICAP) took these responsibilities. Similarly in 1984 Companies Ordinance was promulgated keeping in view country and economy specific factors. Last two milestones were the establishment of Securities and Exchange Commission of Pakistan (SECP) and Pakistan Institute of Corporate Governance (PICG). In Pakistan corporate governance is in developing phase. Main institutions of Pakistan often called regulators (SECP, SBP) are thought to be responsible for making efforts for development of corporate governance in Pakistan. In reality they both are engaged in the development of corporate governance. The Government of Pakistan took initiative by developing Institute of corporate governance, which encourages good corporate governance through different ways. Security and exchange commission of Pakistan was established under

SECP Act 1997, but started its operations on 1st January 1999. SECP has taken different steps for the sound corporate governance system in the country. In March, 2002 SECP took a major step by issuing code of corporate governance for the good governance in Pakistan, Later revised in 2012. The Code consists of many recommendations in line with the international good governance practices. Companies listed on the stock exchanges have to follow the rules by reporting in their reports a corporate governance compliance statement. Around the world, Cases of poor corporate governance can be highlighted. They are mostly related to fraudulent practices such as nepotism, non-compliance of law, irregularities in accounts etc. In Pakistan there are so many examples of poor corporate governance often given a name of Corporate Scandals. They are at firm level as well as national/ provincial level. Major scandals reported so far, namely the PTCL privatization Scandal in 2006, the Mehran bank scandal, the Taj company scandal etc.

2. Literature Review

2.1 Capital Structure and Firm Value

The relationship between leverage and firm value is one of the primary questions in finance and has been studied extensively. Most researches on capital structure take as their point of departure the seminal work of Modigliani and Miller (1958), who derived the Leverage Irrelevance Theorem, concluding that capital structure does not impact firm value in an ideal environment. Their assumption of an ideal financial environment excludes the impact of tax, inflation and transaction costs. This theory received criticism that no firm actually operates in an environment without the impact of inflation, tax and transactional costs. This motivated Modigliani and Miller (1963) to issue amendment. They still argued that a change in the debt to equity ratio does not impact on firm value, however when taxes and other transaction costs are considered two factors need to be acknowledged: First, a firm's weighted average cost of capital diminishes as it raises its debt. Second, a firm's cost of equity increases as it increases its debt since shareholders bear higher business risk due to the increased possibility of bankruptcy. Given the great debate on capital structure, and adding to the aforesaid Modigliani and Miller models (1958 & 1963), a number of theories have provided further contributions. Myers and Majluf (1984) proposed that the "pecking order" framework is based on asymmetric information since managers have inside information on the future prospect of the firm and act in the favor of existing shareholders. According to pecking order theory firms prefer internal finance (from retained earnings) to external finance, and when external finance is required, firms prefer debt before equity. Myers (1984) modified the strict pecking order hypothesis and suggests that firms with many investment opportunities may decide to issue equity before it is absolutely necessary. Myers (2001) hypothesized that debt offers firms a tax shield, and firms therefore pursue higher levels of debt in order to gain the maximum tax benefit and ultimately enhance profitability. However, high levels of debt increase the possibility of bankruptcy. The advantages of this approach include the possibility of deducting interest payments from company tax (Modigliani and Miller, 1963). The study of O'Connell and Cramer (2010) explored significant and positive relationship of leverage and firm value. Findings indicated that high level of debt improves market performance of the firm. Likewise Saeedi and Mahmoodi (2011) investigated relationship of capital structure and firm performance. Results explored that capital structure has significant and positive relation with Tobin's Q. Kim (1978) stated that the disadvantage of debt is the potential cost of financial

distress. Jensen and Meckling (1976) added that an additional disadvantage is the agency costs for equity holders and debt holders. To further substantiate this argument De Angelo and Masulis (1980) predicted an inverse relationship between leverage and investment tax shield, while the association between the corporate tax rate and the debt level is expected to be positive.

According to Bender (2013) the capital structure of a firm may be influenced by its life stage, since financing needs may change as a firm's circumstances do. They also maintain that business risk reduces over the life stages of a firm, allowing financial risk to increase. The information asymmetry theory of capital structure is credited to the work of Ross (1977). He posits that firm managers possess more information about the future prospects of the firm than the market. Therefore management's choice of capital structure may provide the market with signals of a firm's future prospects. Increasing leverage would signal to the market that a firm's managers are confident about servicing the interest charge, and are hence confident about the future prospects of the firm. Therefore an increase in leverage would increase the value of the firm since investors would deem this to be a positive signal of the size and stability of future cash flows. Opler and Titman (1994) reported negative relationship between leverage and firm value. Sample consists of firms from United States. Further Suggested that high leverage for firms inclined to drop off market share and lesser operating performance than their rivals. On the other hand Demsetz and Villalonga (2001) considered leverage and Tobin's Q as endogenous variables. This means that there were two way casual relationships between these variables. They suggested that capital structure affects performance of the firm which in turn affects capital structure. Similarly Salim and Yadav (2012) also examined capital structure relationship with and performance of the firm. The result showed that Tobin's Q was significant and negatively correlated to capital structure.

2.2 Corporate Governance Measures and Firm Value

Research in this stream was initiated by Jensen and Meckling (1976). They identified two types of conflicts: those between shareholders and managers, and those between debt holders and equity holders. They postulate that conflicts between shareholders and managers occur since managers hold less than one hundred percent of the residual claim. Managers do not capture the entire gain from these activities, but they do bear the entire cost of these activities by foregoing expenditures that would benefit them personally, for example. Therefore managers overindulge in personal pursuits at the expense of maximizing the value of the firm. Capital structure is influenced by firm management, which has a long term impact on the firm's capital structure. However, management might be tempted to pursue personal incentives instead of maximizing shareholder value (Myers, 2001). Sami et al. (2011) found that corporate governance features are significant and have positive relation to performance of the firm. Likewise Ammann et al. (2011) reported statistically significant and direct correlation between corporate governance and firm value. Similarly Bhagat and Bolton (2008) found that good corporate governance was significantly and positively related to performance of the firm. Ehikioya (2009) observed that concentrated ownership has a positive relation with performance, Board composition has no impact on performance of firm, CEO duality negatively related to performance of the firm. Balasubramanian et al. (2010) reported that governance index has positive relation with firm value. On the contrary Yammeesri and Herath (2010)

found no significant relationship between corporate governance and firm value. Khatab et al. (2011) reported that corporate governance has positive relation with firm value.

2.2.1 Board Size and Firm Value

An effective board is necessary in the success of the organization. Board is the highest decision making body of the company and is responsible to make sure that their decisions will result in firm's growth. According to Mak and Kusnadi (2005) size of the board and firm value were negatively correlated. Likewise Cheng (2008) provided empirical evidence on the less variability in performance of the firm due to larger boards. They reported negative connection of board size with performance of the firm. They suggested the reason for less variability in corporate performance that larger board's needs consensus so that decisions are less extreme. Whereas Coles et al. (2008) showed a U-shaped relationship, initially Tobin's Q decreases in response to increase in board size, then increases with the further increase in board size. O'Connell and Cramer (2010) explored that board size was less significant as well as inversely related to performance of the firm for smaller firms. While Uchida (2011) found that there is no evidence of performance improvement for Japanese firms that downsized boards do not show performance improvements. Garcia-Ramos and Garcia-Olalla (2011) reported influence of board size was positive on company performance in non-founder-led family firms and influence of board size was negative on company performance founder-led family businesses. Adams and Mehran (2012) argued that size of the board was found significantly and directly related to performance of the firm. They further concluded that for bank governance one should consider unique features of governance regulations. Conversely, Kumar and Singh (2013) found significant and inverse correlation between board size and firm value.

2.2.2 Board Independence and Firm Value

Independent directors on the boards are desirable because of their expertise and independence from management. The higher degree of board independence facilitates independent directors to keep an eye on the actions of the management more strongly and take appropriate governance actions. Erickson et al. (2005) found that outside directors presence on the board does not have positive influence on firm value. They further argued that firms those perform poorly increase outside directors on the board in subsequent periods. Lefort and Urzua (2008) reported that rise in the board independence influences firm value. Whereas Duchin et al. (2010) found that effect of increased outside directors on the average do not improve or harm performance. Kangarlouei, Kavasi and Motavassel (2013) found that there was no significant relationship between the outside directors on the board and firm value.

2.2.3 CEO Duality and Firm Value

The impact of chief executive officer duality on performance of the firm has been debated from an academic viewpoint. Agency theorists call attention to the negative impact of CEO duality from its permitting a CEO to take steps liberally in private best benefits (Jensen & Meckling, 1976; Fama & Jensen, 1983). In contrast, believers of stewardship theory argued about the positive impact of CEO duality (Brickley et al., 1997; Bhagat & Black, 2001). Lam and Lee (2008) found that CEO duality and performance of the firm relation was conditional on the existence of family control aspect. It was also suggested that duality status was good for non-family firms. Amaral-

Bapaista et al. (2011) found that the relationship between CEO duality and firm value was not significant. Gill and Mathur (2011) reported that CEO duality has a positive impact on firm value. While Guillet et al. (2013) found that CEO duality improves performance of the restaurant.

2.2.4 Managerial Ownership and Firm Value

Effect of insider ownership on the performance of the firm has been a topic followed in different studies. Morck et al. (1988) found that association between managerial ownership and firm value first increases, then decreases and finally to some extent go up, that indicates a complex relationship. McConnell and Servaes (1990) supported the results presented by Morck et al. as this study explored that managerial ownership and firm value have significant but non-monotonic relationship. Cho (1998) challenged the assumptions made by earlier studies about exogenous determination of ownership structure. Cui and Mak (2002) reported W-shaped association between insider ownership and performance of the firm. Tobin's Q initially declines with insider ownership, then rises, then declines again and, finally, rises again. Hu and Zhou (2008) found that firms with significant managerial ownership outperforms others those do not have significant managerial ownership. On the other hand Park and Jang (2010) found significant and positive relationship between managerial ownership and firm value.

2.2.5 Ownership Concentration and Firm Value

Demsetz and Lehn (1985) found no significant association between ownership concentration and firm value. Whereas Himmelberg et al. (1999) reported no significant relationship between ownership concentration and firm value. In contrast Gunasekarage et al. (2007) found that balanced ownership structure improves the firm's performance and there is indication of detrimental effects of ownership concentration. Garcia-Meca and Sanchez-Ballesta (2011) found that the ownership concentration is the main ownership structure mechanism that affects firm value. Shah, Butt and Saeed (2011) reported that ownership concentration is negatively related to firm value.

2.3 Capital Structure and Corporate Governance Measures

The association between capital structure and corporate governance becomes very important when taking into account its basic role in value generation and distribution (Bhagat and Jefferis, 2002). In the course of its relations with other mechanisms of corporate governance, capital structure turn out to be capable of shielding a well-organized value creation process, by setting up the ways in which later distribution of generated value is made (Zingales, 1998). On one hand, a change in how debt and equity are dealt with influences firm governance activities by modifying the structure of incentives and managerial control. If, through the mix debt and equity, different categories of investors all converge within the firm, where they have different types of influence on governance decisions, then managers will tend to have preferences when determining how one of these categories will prevail when defining the firm's capital structure. Even more importantly, through a specific design of debt contracts and equity it is possible to considerably increase firm governance efficiency. Joher et al. (2006) research study is conducted to investigate the relationship between ownership structure and debt policy. Results explored that there is negative association between leverage and managerial ownership. Nyonna (2012) found significant but negative association leverage

and managerial ownership. This result is in line with that documented for public companies by (Chen and Steiner, 1999).

3. Hypotheses Development

Based on reviewed studies as (see, e.g. Opler and Titman, 1994; Demsetz and Villalonga, 2001; O'Connell and Cramer, 2010; Khatab et al., 2011; Saeedi and Mahmoodi, 2011; Salim and Yadav, 2012), this study established first and foremost relationship to test i.e. impact of capital structure on firm value. In this way the study documents its first hypothesis as:

- **H_1:** Capital structure significantly determines the firm value.

Based on reviewed studies like (see, e.g. Black, et al., 2006; Bhagat and Bolton, 2008; Ehikioya, 2009; Balasubramanian et al., 2010; Yammeesri and Herath, 2010; Khatab et al., 2011; Yasser, 2011; Sami et al., 2011; Ammann et al., 2011), next hypothesis formulate the relationship between corporate governance and firm value. So the study formulate following hypothesis:

- **H_2:** Corporate governance measures significantly determine firm value.

Based on studies reviewed (see, e.g. Zingales, 1998; Chen et al., 1999; Zingales, 2000; Bhagat and Jefferis, 2002; Berger and Patti, 2003; Joher, 2006; Nyonna, 2012), the study hypothesized impact of capital structure on corporate governance.

- **H_3:** Capital structure significantly determines corporate governance measures.

Overall model for the research is presented in figure 1.

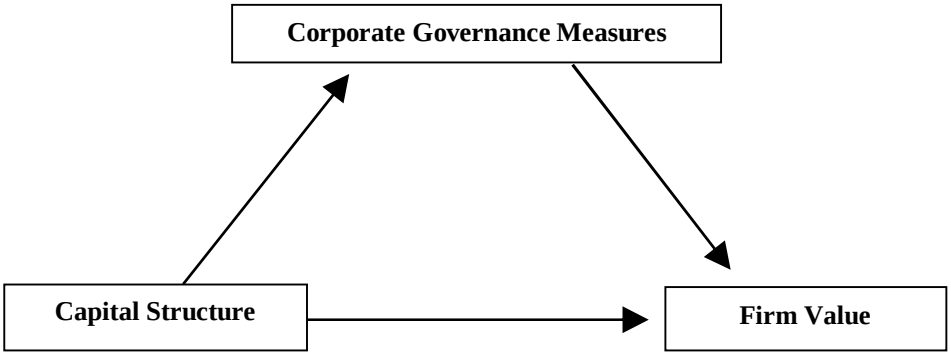

Figure 1: Research Model

4. Research Methodology

Population for the study is comprised of the non-financial companies listed at Karachi Stock Exchange of Pakistan (KSE). 435 non-financial companies constitute population of study. The study included 155 companies in the data analysis as sample. Study is completely based on secondary data which is collected for five years (2008-12). Multiple sources were used to collect data, including annual reports of concerned companies, website of Karachi Stock Exchange.

4.1 Variables of the Study

Variables (board size, board independence, managerial ownership, ownership concentration, CEO duality, leverage and firm value) are included in this study as

discussed in previous section. In first relationship the independent variable is leverage and dependent variable is firm value. In second relation independent variable is corporate governance and dependent variable is firm value. Similarly, in third relationship, independent variable is capital structure and dependent variable is corporate governance.

Operational definitions are presented in below table

Table 1: Operational Definitions of Variables Included in the Study

Variable Name	Symbol Used	Operational Definition
Capital Structure	LEV	Calculated as ratio of total debt to total assets
Board Size	BS	Total number of directors on the board
Board Independence	BI	Ratio of Number of Outside Directors to total number of Directors
CEO duality	CD	A dummy variable that takes on 1 if the CEO is also the chairman of the board, 0 otherwise.
Managerial Ownership	MNO	Ratio of shares held by CEOs, directors, and their immediate family members to total outstanding shares
Ownership Concentration	OWC	Ratio of Common Shares held by five largest to total outstanding stocks
Tobin's Q	Q	Ratio of market value of equity to book value of equity.

4.2 Econometrical Models of the Research

4.2.1 Impact of Capital Structure on Firm Value

$Q_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$

4.2.2 Impact of Corporate Governance Measures on Firm Value

$Q_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 CD_{it} + \beta_4 MNO_{it} + \beta_5 OWC_{it} + \varepsilon_{it}$

4.2.3 Impact of Capital Structure on Corporate Governance

$BS_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$

$BI_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$

$CD_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$

$MNO_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$

$OWC_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$

5. Results

5.1 Descriptive Analysis

Table 2: Descriptive Statistics

	BS	BI	CD	MNO	OWC	LEV	Tobin's Q
Mean	8	0.630	0.230	0.246	0.658	0.579	0.766
Median	7	0.636	0	0.151	0.671	0.607	0.564
Max	15	1.000	1	0.931	0.999	0.980	4.357
Min	6	0.000	0	0.000	0.095	0.002	-1.076
Std. Dev.	1.510	0.224	0.421	0.254	0.188	0.214	0.661
Observations	775	775	775	775	775	775	775

Above table presents the descriptive statistics of all variables used in this study. As described in previous section before running the regression analysis this study calculated descriptive statistics shown in above table. On average companies have the board size of 8. The maximum available board size in the sample was 15. The standard deviation is only 2 (aprox.) board members. These statistics show that non-financial companies in Pakistan tend to have smaller boards. Profile analysis shows that companies have the board independence of 63% (aprox) on average. Sample includes both kind of companies, with 100% outside directors and on the other hand no independence. Level of board independence in Pakistani companies is moderate. CEO also serves as the chairman of the board on average approximately in 23 percent of the cases while 77% companies have independent CEO. Which shows that majority of the companies have separate CEO and Chairman. On the average managerial ownership is 25% (aprox) whereas average holding by five largest shareholders is 65.8% which shows high concentration of ownership and managerial ownership respectively. Sample companies employ about half of their funds by borrowing externally. Average debt ratio calculated is 0.58 which shows that companies have almost equally distributed capital structure. Tobin's Q 0.76 is not indicating good stock market performance of sample companies during selected study period.

5.2 Correlation Analysis

This study also tested the data for multicollinearity before estimating the coefficients.

Table 3: Correlation Matrix

	BI	BS	CD	MNO	OWC	LEV	Q
BI	1	0.099**	-0.085*	0.05	0.066	0.042	0.115**
BS		1	-0.135**	0.108**	-0.024	0.045	0.135**
CD			1	-0.022	-0.033	0.057	-0.143**
MNO				1	0.196**	-0.033	0.129**
OWC					1	-0.07	0.248**
LEV						1	-0.069
Q							1

Notes: Pearson correlation coefficient (**= Significant at 1%, *= significant at 5 %)

The above table presents the pair-wise correlation matrix for all variables used in the model. The correlation matrix does not suggest any serious concern for multicollinearity problems.

5.3 Regression Analysis (Interrelationship)

Table 4: Impact of Capital Structure and Corporate Governance on Firm Value

	Q	**Q**
C	0.603*** (0.085)	0.44 (0.354)
BS	---	-0.023 (0.033)
BI	---	0.343** (0.156)
CD	---	0.155 (0.095)
MNO	---	-0.103 (0.271)
OWC	---	0.439* (0.264)
LEV	0.282* (0.144)	---
R-squared	0.715	0.718
Adj. R-square	0.643	0.645
St. Error of Regression	0.394	0.393
F-statistic	10.006***	9.850***

(***= Significant at 1%, **= significant at 5 %, * =significant at 10 %)

Equation of capital structure and firm value relationship in the above table show quantitative results that the model's validity is implied by significant F-statistic and high determination power indicated by R-Squared, and adjusted R-squared. Relationship between Leverage and Tobin's Q is significant with positive sign which indicates that high leverage leads to high Tobin's Q. Determination power (R-squared: 72%, Adj. R-squared: 64%) of model and the strength of relation (coefficient: 0.282) both indicated the good statistical health of model. Further it is to be stated that capital structure is showing significant relationship ($p<0.10$). This explains the generalizability level of the results of this study. Equation of corporate governance and firm value relationship in above table shows significant validity statistic and high determination power implied by (F-stat, and R-Squared). Overall goodness of fit (adjusted R-squared) is also high (66%). Individually, board size, CEO duality and managerial ownership were not showing the generalizable relationships while board independence and ownership concentration has significant and positive relationships. Further it is to be stated that board size, CEO

duality and managerial ownership are not showing significant relationship at a level of significance 10%. While board independence is showing significant relationship ($p<0.05$) and on the other hand ownership concentration is showing significant relationship ($p<0.10$).

Table 5: Impact of Corporate Governance on Capital Structure

	BS	**BI**	**CD**	**MNO**	**OWC**
C	8.098*** (0.103)	0.621*** (0.022)	0.218*** (0.036)	0.260*** (0.013)	0.663*** (0.0129)
LEV	-0.177 (0.176)	0.006 (0.037)	0.021 (0.061)	-0.025 (0.021)	-0.009 (0.0219)
R-squared	0.919	0.835	0.875	0.958	0.918
Adj. R-square	0.898	0.794	0.843	0.947	0.898
St. Error of Reg	0.481	0.102	0.167	0.059	0.060
F-statistic	45.171	20.193***	27.849***	90.030***	44.797***

(*** =Significant at 1%, **=Significant at 5 %, * =Significant at 10 %)

The above table shows capital structure doesn't seem to have any impact on governance measures as tested individually by fixed effects regression method. Statistics show that no measure is predictable on the basis of capital structure, as it doesn't bring any changes in governance structure of companies. None of the equations show generalizable figures, further it is to be stated that these results between capital structure and corporate governance measures are not showing generalizable relationship at level of significance of 10%. Analysis also shows that slope coefficients are very small except the board size which has the beta of (-0.177).

6. Discussion

6.1 Descriptive

Results of table [2] present board size of eight (8) directors on average. This result is consistent with other studies including (Lei and Song, 2012; Guo and KGA, 2012; Fiador, 2013 and Sheikh and Wang, 2012). Board independence of 62.5 % is reported on the average. This finding is in line with other studies including (Bhagat and Bolton, 2008; Duchin et al., 2010 and Cheng, 2008). Finding regarding CEO duality on the average is 23%. Result has similarity with (Sheikh and Wang, 2012). This study showed managerial ownership on the average is 25% (aprox). Finding is similar with earlier study of (Sheikh and Wang, 2012). Results showed ownership concentration on the average is 66% (aprx). Similar result was observed by (Sheikh and Wang, 2012). Leverage on the average is 58% (aprx). Result for leverage is aligned with other studies including (Sheikh and Wang, 2012; Ammann et al., 2011 and Mashayekhi and Bazazb, 2008). The study showed Tobin's Q of 0.776 on average. Similar result is cited by (Yasser, 2011; Khatab et al., 2011).

6.2 Interrelationship Discussion

When Leverage and Tobin's Q relationship is estimated results suggest that coefficient of leverage is statistically significant while the relationship of leverage and Tobin's Q is positive. This relationship suggests that high level of leverage improves market performance of the firm. Which portray that additional level of debt will improve stock market performance (Tobin's Q). This direct relationship between leverage and Tobin's Q is in line with the results of (O'Connelly et al., 2012; Khatab et al., 2011). For equation of corporate governance and firm value result shows that coefficient of board independence is statistically significant and positively related to Tobin's Q. This finding suggest that board with maximum independent director will lead to better performance, because independent members will watch management effectively and compel them to work for shareholders wealth maximization goal, it will result in a better stock market performance. Positive correlation between board independent and Tobin's Q is similar with the findings of (Omran et al., 2008; O'Connelly et al., 2012, Ehikioya, 2009). Coefficient of ownership concentration (holding by five largest shareholders) is also statistically significant and positively associated to Tobin's Q. Suggesting that block holders as compare to dispersed shareholders have more ability to compel the executives to take corrective actions for shareholders wealth maximization. This positive relation is similar with the results of (Kapopoulos and Lazaretou, 2006; Sundgren and Zhou, 2009). Board size, CEO duality and managerial ownership are showing no significant association between these variables and firm value. Corporate governance affects the firm value partially as there are many governance proxies but two of selected five measures shown the significant relationship.

Findings for capital structure and corporate governance relationship don't support research statement of this study, and we can assert that corporate governance is unpredictable on the basis of capital structure of sample firms. Leverage and board size equation expresses that relationship is not significant, similarly equation for board independence produces not significant results, equation for CEO duality and leverage asserts about the no significant role, and equations for managerial ownership and ownership concentration producing the same results of insignificant relationship. The conclusion that governance structure is not as volatile as capital structure is, which is based not only on the p-values or significance tests, but also on the basis of their respective slope coefficients. In some studies assertions were presented that sometime debt covenants brings certain changes in the governance boards and other measures, but from findings it seems that in Pakistan neither the debt (bond) market is much organized nor the regulations for governance system allow such kind of changes, that's why statistically there is no evidence of that capital structure choice brings any kind of favorable or unfavorable changes in the corporate governance structure of sample companies.

7. Conclusion

This study is conducted with several objectives in mind. At one side this research study is an attempt to investigate the relationship between capital structure and firm value of non-financial firms listed on the Karachi Stock Exchange Pakistan during the financial period of 2008-2012. This study is based on secondary data. Findings for direct relationship show a significant positive relationship with the firm value. The findings certify that highly levered firms outperform in the stock market. On the other hand this study

objective was also to investigate corporate governance and firm value relationship. This research study found significant relationship of board independence and ownership concentration with firm value. Other objective of this study was to investigate the relationship between capital structure and corporate governance measures. This study found that leverage is unable to predict any of governance measures with sufficient statistical evidence. Summing up, although important steps have been taken by the Pakistani government for the development of corporate governance in the country, but still firms in Pakistan as compared to firms in developed countries have weak mechanisms of corporate governance. This weak mechanism is also evident from recent corporate scandals in Pakistan, name of some sandals are: Taj Company, Crescent Bank Fraud, PTCL privatization, Mehran bank and ENGRO Group of Companies. These corporate scandals were the result of mismanagement or more specifically bad governance. The consequences of these corporate scandals were borne by all the stakeholders. All parties have direct or indirect interest in corporate governance for the effective performance of the firm. Shareholders interest is in their wealth maximization, management in their salaries and other benefits, creditors have interest in the sound position of company to be able to pay back their money along with returns, state have interest due to proper tax assessment and collection. In response these individuals gives value in the form of social, natural, human, and other forms of capital. As the study already stated above that corporate governance is at the evolutionary stage in developing countries. However that does not mean that poor corporate governance is not present in the developed world. With cases such as the Enron bankruptcy, it is evident that corporate governance misconduct are present everywhere. Major issues in corporate governance are Ethical dilemmas, Window Dressing, Board Composition, and interaction with minority shareholders. The results indicate that corporate governance attributes, in part, explicate the financing behavior of Pakistani firms. Moreover, this study has laid some groundwork by illuminating the significant relationship between corporate governance measures and capital structure on which a more detailed evaluation could be based.

8. Practical Implications

Stakeholders should interpret financing pattern and its consequences by keeping an eye on governance attributes too. The corporate managers should consider the impact of leverage on value before adjusting the debt levels and also to understand how internal governance mechanisms affect the firm value. Investors should invest in highly levered companies to insure high capital gains but at the same time have to consider corporate governance attributes in to account for comparative choice between available investment opportunities.

REFERENCES

Adams, R. B., & Mehran, H. (2012). Bank board structure and performance: Evidence for large bank holding companies. *Journal of Financial Intermediation,* 21 (2), 243-267.

Amman, M., Oesch, D., & Schmid, M. M. (2011). Corporate governance and firm value: International evidence. *Journal of Empirical Finance,* 18 (1), 36-55.

Amaral-Baptista, M. A., Klotzle, M. C., & De Melo, M. A. (2011). CEO duality and Firm Performance in Brazil: Evidence From 2008. *RPCA Rio de Janeiro,* 5(1), 24-37.

Balasubramanian, N., Black, B. S., and Khanna, V. (2010). The relation between firm-level corporate governance and market value: A case study of India. *Emerging Markets Review*, 11 (4), 319-340.

Bender, R. (2013). Corporate financial strategy. Routledge.

Berger, A. and Patti, E. (2003). Capital structure and firm performance: a new approach to testing agency theory and an application to the banking industry. FEDS Working Paper No. 2002-54, Washington DC.

Bhagat, S. and Jefferis, R. (2002). The Econometrics of Corporate Governance Studies. *The MIT Press*, Cambridge, MA.

Bhagat, S., and Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, 14 (3), 257–273.

Bhagat, S., & Black, B. (2001). Non-Correlation between Board Independence and Long-Term Firm Performance, The. J. CorP. l., 27, 231.

Bita, Mashayekhi, and Mohammad S. Bazaz, (2008). Corporate Governance and Firm Performance in Iran. *Journal of Contemporary Accounting & Economics*, 4 (2), 156-1 72.

Brickley, J. A., Coles, J. L., and Jarrell, G. (1997). Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance*, 3(3), 189-220.

Chen, C. R.,and Steiner, T. L. (1999). Managerial Ownership and Agency Conflicts: A Nonlinear Simultaneous Equation Analysis of Managerial Ownership, Risk Taking, Debt Policy, and Dividend Policy. *Financial Review*, 34 (1), 119-136.

Cheng, S. (2008). Board size and the variability of corporate performance. *Journal of Financial Economics*, 87 (1), 157-176.

Cho, Myeong-Hyeon (1998). Ownership structure, investment, and the corporate value: an empirical analysis. *Journal of Financial Economics*, 47 (1), 103–121.

Coase, R. H. (1937). The nature of the firm. *Economica*, 4, 386-405.

Cui, H., and Mak, Y. (2002). The relationship between managerial ownership and firm performance in high R&D firms. *Journal of Corporate Finance*, 8 (4), 313-336.

DeAngelo, H. and Masulis, R. (1980). Optimal capital structure under corporate and personal taxation. *Journal of Financial Economics*, 8 (1), 3-29.

Demsetz, H., Villalonga, B., (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7 (3), 209–233.

Demsetz, H. and Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93, 1155–1177.

Duchin, R., Matsusaka, J. G., and Ozbas, O. (2010). When are outside directors effective? *Journal of Financial Economics*, 96 (2), 195-214.

Ehikioya, B. I. (2009). Corporate governance structure and firm performance in developing economies:evidence from Nigeria. *Corporate Governance*, 9 (3), 231-243.

Erickson, J., Park, Y. W., Reising, J., and Shin, H. H. (2005). Board composition and firm value under concentrated ownership: The Canadian evidence. *Pacific-Basin Finance Journal,* 13 (4), 387-410.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics,* 26(2), 301-325.

Fiador, V. O. (2013). Corporate governance and value relevance of financial information: evidence from the Ghana Stock Exchange. *Corporate Governance*, 13 (2), 208-217.

Garcia-Meca, E., and Sanchez-Ballesta, J. P. (2011). Firm value and ownership structure in the Spanish capital market. *Corporate Governance*, 11(1), 41-53.

Garcia-Ramos, R., and Garcia-Olalla, M. (2011). Board characteristics and firm performance in public founder- and non-founder-led family businesses. *Journal of Family Business Strategy*, 2, 220-231.

Gill, A., and Mathur, N. (2011). Board Size, CEO Duality, and the Value of Canadian Manufacturing Firms. *Journal of Applied Finance & Banking,* 1(3), 1-13.

Guillet, B. D., Seo, K., Kucukusta, D., and Lee, S. (2013). CEO duality and firm performance in the U.S. restaurant industry: Moderating role of restaurant type. *International Journal of Hospitality Management,* 33, 339-346.

Gunasekarage, A., Hess, K., and Hu, A. (2007). The influence of the degree of state ownership and the ownership concentration on the performance of listed Chinese companies. *Research in International Business and Finance*, 21 (3), 379-395.

Guo, Z., & Kga, U. K. (2012). Corporate governance and firm performance of listed firms in Sri Lanka. *Procedia-Social and Behavioral Sciences*, 40, 664-667.

Himmelberg, C. P., Hubbard, R. G and Palia, D., (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics*, 53 (3), 353–384.

Hu, Y., and Zhou, X. (2008). The performance effect of managerial ownership: Evidence from China. *Journal of Banking & Finance,* 32 (10), 2099-2110.

Jensen, M. C., and Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and capital structure. *Journal of Financial Economics,* 3, 305–360.

Jensen, M. (1986). Agency costs of free cash flow, corporate finance and takeover. *American Economic Review,* 76 (2), 323-329.

Joher, H., Ali, M., and Nazrul. (2006). The Impact of Ownership Structure on Corporate Debt Policy: Two Stage Least Square Simultaneous Model Approach for Post Crisis Period: Evidence From Kuala Lumpur Stock Exchange. *International Business & Economics Research Journal,* 5 (5), 51-63.

Kapopoulos, P., and Lazaretou, S. (2006). Corporate ownership structure and firm performance:evidence from Greek firms. Working paper bank of Greece, 1-34.

Khatab, H., Masood, M., Zaman, K., Saleem, S., and Saeed, B. (2011). Corporate Governance and Firm Performance: A Case study of Karachi Stock Market. *International Journal of Trade, Economics and Finance,* 2 (1), 39-43.

Kim E.H. (1978) A Mean-Variance Theory of Optimal Capital Structure and Corporate Debt Capacity. *The Journal of Finance,* 33(1), 45-63.

Kumar, N., and Singh, J. P. (2013). Effect of board size and promoter ownership on firm value: some empirical findings from India. *Corporate Governance*, 13 (1), 88-98.

Lefort, F., and Urzúa, F. (2008). Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, 61 (6), 615-622.

Lei, A. C., and Song, M. F. (2012). Board structure, corporate governance and firm value:evidence from Hong Kong. *Applied Financial Economics*, 22 (15), 1289-1303.

Mak, Y., and Kusnadi, Y. (2005). Size really matters: Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal*, 13 (3), 301-318.

McConnell, John and Servaes, Henri. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27 (2), 595–612.

Miller, M. (1977). Debt and Taxes. *Journal of Finance*, 32 (2), 261-275.

Modigliani, F. and Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, 53 (3), 433-443.

Modigliani, F., and Miller, M. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review*, 48, 261–297.

Morck, R., Shleifer, A., and Vishny, R. W. (1988). Management ownership and market valuation, an empirical analysis. *Journal of Financial Economics*, 20, 293-315.

Myers, S. C., and N. S. Majluf.(1984). Corporate financing and investment decisions when firms have information the investors do not have. *Journal of Financial Economics*, 13, 187-221.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39 (3), 575-592.

Nyonna, D. Y. (2012). Simultaneous Determination of Insider Ownership and Leverage: The Case of Small Businesses. *Economics & Business Journal: Inquiries & Perspectives*, 4 (1), 9-20.

O'Connell, V., and Cramer, N. (2010). The relationship between firm performance and board characteristics in Ireland. *European Management Journal*, 28 (5), 387-399.

Omran, M. M., Bolbol, A., and Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International Review of Law and Economics*, 28 (1), 32-45.

Opler, T. C., and Titman, S. (1994). Financial distress and corporate performance. *Journal of Finance*, 49(3), 1015–1040.

Park, K., and Jang, S. (2010). Insider ownership and firm performance: An examination of restaurant firms. *International Journal of Hospitality Management*, 29 (3), 448-458.

Ross, S. (1977). The determination of financial structure: the incentive signaling approach. *Bell Journal of Economics*, 8, 23-40.

Saeedi, A and Mahmoodi, I. (2011). Capital Structure and Firm Performance: Evidence from Iranian Companies. International Research *Journal of Finance and Economics*, 70, 21-28.

Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia-Social and Behavioral Sciences*, 65, 156-166.

Sami, H., Wang, J., and Zhou, H. (2011). Corporate governance and operating performance of Chinese listed firms. *Journal of International Accounting, Auditing and Taxation,* 20 (2), 106– 114.

Sheikh, N. A., and Wang, Z. (2012). Effects of corporate governance on capital structure: empirical evidence from Pakistan. *Corporate Governance,* 12 (5), 629-641.

Sundgren, S., and Zhou, M. M. (2009). Does Ownership Affect Performance? Evidence from Chinese listed companies.

Uchida, K. (2011). Does corporate board downsizing increase shareholder value? Evidence from Japan. *International Review of Economics and Finance*, 20 (4), 562-273.

Yammeesri, J., and Herath, S. K. (2010). Board characteristics and corporate value:evidence from Thailand. *Corporate Governance,* 10 (3), 279-292.

Yasser, Q. R. (2011). Corporate Governance and Performance: An Analysis of Pakistani Listed Firm. *Global Journal of Management and Business Research,* 11 (10), 27-38.

Zhang, G. (1998). Ownership concentration, risk aversion and the effect of financial structure on investment decisions. *European Economic Review,* 42 (9), 1751-178

Zingales, L. (2002). In search of new foundations. *Journal of Finance,* 55 (4), 1623-1653.