Pages: 253 – 267 | Vol. VIII, No. II (Spring 2023) | DOI: 10.31703/ger.2023(VIII-II).19
URL: http://dx.doi.org/10.31703/ger.2023(VIII-II).19 | Global Economics Review (GER)

Cite Us

Examining the Interplay of Corporate Governance, Ownership Structure, and Capital Structure: The Impact of Board Governance as a Moderator

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p-ISSN: 2521-2974 | e-ISSN: 2707-0093 | L-ISSN: 2521-2974

Citation: Hussain, F., Ziaullah, M., & Hayyat, A. (2023). Examining the Interplay of Corporate Governance, Ownership Structure, and Capital Structure: The Impact of Board Governance as a Moderator. *Global Economics Review, VIII*(II), 253-267. https://doi.org/10.31703/ger.2023(VIII-II).19

Abstract: *This study examines the impact of board governance on the relationship between Ownership Structure (OS) and Financial Leverage (FLEV) using Ordinary Least Square (OLS) models. Analyzing data from sixty non-financial companies listed on the Pakistan Stock Exchange (2014-2018), we find a negative association between manager shareholding and debt-equity structure. No significant associations are found between institutional shareholders, foreign investors, independent directors, and capital structure. The beta coefficient of board gender diversity is negatively correlated with financial leverage. Results vary across models, highlighting nuanced interactions. Our findings offer insights for policymakers, managers, and investors seeking to enhance the economic performance of Pakistani firms.*

Key Words: Corporate Governance, Ownership Structure, Capital Structure, Non-financial Companies, PSX

JEL Classification:

Introduction

The term "Capital structure" pertains to the various options for obtaining funds to meet a company's current and future investment requirements. Specifically, capital structure (CS) choices involve deciding between obtaining financing through debt or equity. Making optimal capital structure decisions can reduce the risk of business, increase the company's net present value investment plans, and enhance firm worth for shareholders. Having an appropriate balance of debt to equity is crucial not only for maximizing profits but also for enabling a company to meet the demands of the competitive environment (Javid et al., 2021).

In 1958 Modigliani and Miller (M&M) established the foundation of contemporary finance by introducing the irrelevance of debt proposition. Every combination of debt-equity financing is equally effective in an ideal marketplace, and thus, variations in CS have no impact on firm value. However, the value of a company's determined by the income produced by its resources. Subsequently, M&M (1963) argued that variation in CS has an effect on company value, and companies with high leverage have a higher value as compared to unleveraged companies because interest

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payments are tax-deductible. Trade-off theory (TOT) aims to determine an optimal capital structure by balancing costs such as profitability off bankruptcy cost and agency cost and benefits of debt like tax concession on interest payments. In contrast, pecking order theory (POT) proposes a pecking order of investment, with internally produced funds being used first, second externally produced funds like funding through debt, and thirdly financing through issuing equity finance as their last option. According to Howe, 1997, a signalling theory proposed variation in CS and payment policy communicates information outside of the organization (investors). Overall, each theory of capital structure is based on a different set of assumptions, there is no all-encompassing theory that can be applied universally (Myers, 2001).

The fundamental objective of creating a capital structure is to increase investors' capital by decreasing the cost of capital (COC). Safeguarding the individual rights of investors and also protecting the combined benefits of investors can be achieved through effective corporate governance and addressing any unresolved issues. A dependable association among shareholders, investors, and lenders can be established through good corporate governance. Corporate governance (CG) is linked with sustained growth at both the organizational level and national level. The manager plays a vital role in corporate governance by making key decisions about business operations and hiring and firing of employees. The idea of CG and ownership structure (OS) is still relatively new to some researchers; inadequate research has been conducted on the relationship between OS and CS especially within Pakistan such as (Ahmad et al., 2018) various researchers have used different variables in corporate governance, dividend policy, financial leverage, and company worth to explore their nexus. Most recent research has focused on investigating the effect of corporate governance on the financial performance of companies and exploring the nexus between corporate governance and capital structure.

However, the relationship between OS and CS with the moderating role of board governance has been briefly discussed in Pakistan. While Amin et al. (2022) observed moderating function of female directors on the association between CG and firm investment decisions from a Pakistani perspective. The research of Zaid et al. (2020) examined the moderating effect of Board gender diversity (BGD) on the association between CG and firm debt to equity decisions in Palestine. Sheikh (2019) has conducted research to observe the connection between CG and CS, but no such research has been conducted in Pakistan to investigate the effect of OS on CS by moderating the effect of board governance like a female leader on the board and board independence. Many studies in the corporate administration field have investigated the direct connection between OS and the performance of the company. However, the outcomes of these studies have been inconsistent as the study of Kansil and Singh (2018) indicated a positive correlation between institutional investors and company performance. This is in line with the study of Yeh (2019). According to Kao et al (2018), there is a positive association between foreign investors and director ownership with the performance of a firm. Therefore, diverse outcomes and very small studies in developing economies (in general) and particularly in Pakistan are important causes that have proposed the need for this empirical research titled, Effect of OS on CS with the Moderating Role of Board Governance.

The present study builds noteworthy contributions in the following ways:

- According to the research's best knowledge, this study is unique in its examination of the moderating influence of board governance on the connection between OS and CS especially in the Pakistani context. While previous studies have investigated the direct link between OS and CS, as well as between CG and CS decisions, this research provides valuable insights into the moderating role of board governance elements i.e.

female directors, and independent directors in the association between OS and debt-equity decisions.

- The theoretical contribution of this study is noteworthy, as it suggests that the influence of OS on CS becomes clearer when board governance elements such as female directors and board independence are considered moderators.
- The study highlights the importance of board governance in the Pakistani context of Non-Financial firms. The findings propose that companies with diverse and independent boards are more likely to make better decisions regarding debt-equity, which can lead to improved financial performance of firms.
- This study adds to the literature on corporate governance providing evidence of the effectiveness of board governance in emerging economies like Pakistan. The results propose that board governance factors such as gender diversity on the board and board independence can play a critical role in enhancing the financial performance of the companies.
- The existing literature on the association between OS and CS has produced diverse results, creating ambiguity in the discussion. Thus, the research helps to clarify the existing debate by providing evidence of the moderating effect of board governance, like female leaders on the board and independent directors, in supporting the nexus between OS and corporate CS decisions.

In summing up, this research study gives helpful insights into the connection between OS and highlights the importance of moderating the role of board governance in this association. The outcomes have considerable implications for policymakers, managers, and investors interested in augmenting the financial performance of Pakistani companies.

Literature Review & Hypothesis Development

Ownership Structure and Capital Structure

The principal-agent theory states that a conflict of interest between the Principal and Agent might create agency problems (Jensen & Meckling, 1976). To keep away from such dreadful circumstances, financiers try to establish the OS in the form of Institutional Ownership (INST) and Foreign Ownership (FO), which give permission to oversee the managers dealing in order to decrease the agency issue, which cause to enhance the performance of the company (Rashid, 2020). Company voting rights depend on the number of shares held by the ownership structure or particular individual. OS and CS have obtained more importance in the last few years. Ahmad et al. (2018) conducted research on the association between OS and CS by taking various variables such as Ownership concentration and CS, Management Ownership and CS, INST and CS, FO and CS.

Managerial Ownership and Capital Structure

Managerial ownership (MO) is considered one of the company's administration monitoring strategies (Bazhair & Alshareef, 2022). Corporate ownership supports managers to boost the debt capital of the company, proposing that managers whose financial enticements are probably associated with the wealth of outsiders will follow further debt to enhance the company value and increase the voting right of managers and reduce the possibility of a takeover. Accordingly, MO may help support the interests of principal and agent, so decreasing principal-agent disagreement in companies (Nguyen et al., 2021) Self-regarding managers will utilize more free cash flow freely, which may direct to the fact of higher costs of investment. According to Ahmad et al (2018), the mixed findings in this nexus, such as MO have a significant negative impact on the debt ratio. The study by Grando-Peiro and Lopez-Gracia (2017), indicated a negative association between OS and CS. The positive link between

MO leverage is when the percentage of managerial ownership is between 18% and 46%. (Feng et al., 2020). Based on above mentioned debate, we form the following hypotheses:

Hypothesis 1 (H1): Managerial Ownership has a significant impact on capital structure.

Institutional Ownership and Capital Structure

A big body of experimental studies documented that institutional shareholding (INST) considerably develop the governance of companies (Alvarez et al., 2018; Bazhair & Alshareef, 2022). Illustrations of institutional owners consist of banks, mutual funds firms, pension funds companies and insurance companies. The role of INST investors in promoting sound company administration is grounded in the Principal-agent relationship (Jensen, 1989, 1993). According to Jensen (1993), INST investors form the internal administration of a company and alleviate the failure of internal administration. In addition to this, according to Omran and Tahat (2020), INST investors diligently monitor the managers due to their strong managerial expertise and monetary information. According to Ahmad et al. (2018), positive nexus between INST investors and CS. The study of Shehadeh et al. (2022) in Amman Stock Exchange listed firms. The results of the study report a positive/negative association between institution investors and CS. Although earlier study documents diverse outcomes, we formulate the next hypotheses as under:

Hypothesis 2 (H2): Institutional ownership has a significant effect on capital structure

Foreign Ownership and Capital Structure

In the financial system, foreign ownership (FO) plays a vital role particularly in underdeveloped nations (Nyuyen & Duong, 2021). In addition, companies having a large proportion of international investors will have more diverse financial sources toward obtain funds due to their repute and ties as compared to other organizations. Previous empirical studies indicated mixed outcomes in the FO-CS relationship such as the study of Harymawan et al. (2020) indicates a positive association between FO and CS in 524 companies listed in Indonesian Stock Exchange from 2014-2016. Their results indicated that holders of the debt give prefer foreign-owned firms in Indonesia. The research of Phung and Le (2013) indicated a positive association between FO and the leverage of firms listed in Vietnam. In Vietnam, high asymmetry information level, for that reason the results propose that international investors have an incentive to force companies to borrow more funds to decrease principal-agent problems.

Some other studies also showed a positive association between FO and CS (Mishra, 2013; Sivathaasan, 2013). On the other hand, according to Le and Tannous (2016), FO is negatively associated with CS. According to Gurusamy (2021), there is a negative association between FO and CS. Several other studies also indicated a negative association between FO and CS (Muñoz-Mendozaet al., 2019; Ahmad et al., 2018). According to Gupta et al. (2020), the association between FO and CS is a statistically significant negative association by using the generalized method of moments (GMM) technique On the basis of the above-said debate we established the next hypotheses as follows:

Hypothesis 3 (H3): Foreign ownership has a significant effect on capital structure.

Moderating effect of Board Independence

According to Fan et al. (2019), from an agency theory point of view, that high percentage of Independent directors (IND) in the company boardroom is assumed strong company administration tool. Furthermore, the existence of IND decreases asymmetry information and increases the quality and frequency of community information issued by top administration (Amin et al., 2022). Likewise, financial transparency was improved by the board independence, as a result, due to high credit rating company has more availability of capital and in addition provide a guarantee that the interest of the debt holder will be safeguarded (Zahid et al., 2020). The prior empirical literature reports mixed outcomes on the direct association between Independent directors and leverage such as there is a positive association between the percentage of independent directors and firm leverage (Zaid et al. 2020; Amin et al.2022). Furthermore, Usman et al. (2019) document that companies with independent directors disburse a smaller amount for debt finance. Thus, it is believed that IND can influence managers, institutional investors and foreign investors to maintain an optimal level of capital structure. Owing to the lack of this evidence especially from the Pakistani perspective, the next hypotheses are constructed to fill the information gap in scholar's literature:

- **Hypothesis 4 (H4):** Independent directors significantly moderate the relationship between ownership structure and firm capital structure.
- **Hypothesis 4a (H4a):** Independent directors significantly moderate the association between managerial ownership and firm capital structure.
- **Hypothesis 4b (H4b):** Independent directors significantly moderate the association between institutional ownership and firm capital structure.
- **Hypothesis 4c (H4c):** Independent directors significantly moderate the association between foreign ownership and firm capital structure.

The Moderating Effect of Board Gender Diversity

The board members play a prime role in resolving agency problems among the other corporate governance aspects. Board gender diversity (BGD) is seen as a significant attribute of board effectiveness (Amin et al.2022). The study by Li and Li (2020) examined that in contrast to men, women leaders on the board show greater independence level, diligence, and responsibility. The inclusion of women leaders in the board team enhances the group's collective knowledge by decreasing organized biases and recommending different cultural experiences and social networks that challenge the postulations commonly held by the male director (Bass, 2019). The previous studies indicated that the monitoring of women leaders is more stringent and independent as compared to men counterparts, and the representation of female director make sure to enhance their presence and decrease principal-agent conflicts. Likewise, the active participation of women directors in the evaluation of complicated decisions offers greater essential advantages for shareholders. According to Zahid et al. (2020), thus, with effective monitoring of board gender diversity reduce principal-agent conflict of interest and enhances the confidence of debtholders.

The direct nexus between BGD and CS has been discussed in academic literature however presents conflicting results. In this background, female directors are greater risk averse as compared to male directors and the representation of women leaders in the company boardroom negative influence on the debt ratio (Amin et al., 2022). Similarly, the study of Loukil et al. (2016) documented that the tendency of taking a greater risk by male directors leads to the utilization of higher debt. According to Usman et al. (2019), active involvement and strong supervision and representation in the board can mitigate the opportunistic behaviour of the management and decrease the asymmetry of information. Accordingly, the representation of female directors in the boardroom sends positive signals to the lenders about debt repayment and interest, potentially most important to augment the availability of debt for the firm. In view of Pakistan, the company culture and environment are mostly dominated by males, which does not give permission to women leaders to go up in ranking to the company board and limits the contribution of female directors in the decision-making process (Amin et al., 2022).

In line with international CG, reforms meant decreasing the gender gap, the Code of Corporate Governance 2017 and 2019 involved listed companies directed to have a minimum of one women leader in the boardroom (SECP, 2017, 2019). Pakistan is a developing country with having poor administration system and ownership concentration because most family-owned firms are listed (Shahzad et al., 2018). Owing to the lack of moderating effect of BGD on the relationship between OS and CS especially in Pakistan and inconsistent outcomes in the empirical literature on the moderating influence of gender-diverse boards in family ownership companies.

In sum, we believe that moderating the role of a gender-diverse board can strengthen the relationship between governance structure i.e. OS and external financing decisions. As a result, to test the moderating effect of gender diversity, we construct the following hypotheses.

Hypothesis 5 (H5): Board gender diversity significantly moderates the relationship between ownership structure and capital structure.

Hypothesis 5a (H5a): Board gender diversity significantly moderates the relationship between managerial ownership and capital structure.

Hypothesis 5b (H5b): Board gender diversity significantly moderates the relationship between institutional ownership and capital structure.

Hypothesis 5c (H5c): Board gender diversity significantly moderates the relationship between foreign ownership and capital structure.

Research Design

Sampling and Data Collection

The sample of research based on non-financial sector firms registered in PSX was collected over the period from 2014-2018. The data was obtained from companies' annual reports. The research study utilized panel data as a sample containing data across firms and overtime. This research study used Ordinary Least Square (OLS), Fixed effect (FE) and Random effect (RE) models. Thus, to remove the problem of autocorrelation and heteroscedasticity, Correlated Panels Corrected Standard Errors (PCSEs) are employed.

Figure 1

Conceptual Framework

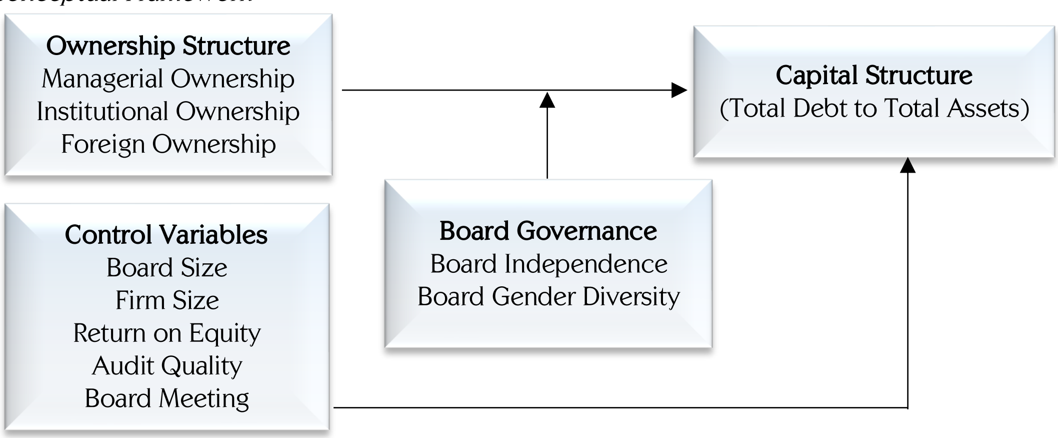

Table 1

Variables Definitions and Measurement

Variable	Measurement	Sources of measurement
Dependent Variable		
Capital structure (CS)	Total debt to total assets	Amin et al. (2022)
Independent Variables		

Variable	Measurement	Sources of measurement
Managerial ownership (MO)	Shareholding ratio of management	Feng et al. (2022)
Institutional ownership (INST)	Ratio of shares owned by institutional investors	Rashid (2020)
Foreign ownership (FO)	Ratio of shares owned by Foreign investors	Rashid (2020)
Moderating Variables		
Board independence (BIND)	Proportion of independent directors in the board	Zaid et al. (2020)
Board gender diversity (BGD)	Proportion of female directors on the board.	Zaid et al. (2020b)
Control Variables		
Board size (BSIZE)	Total number of directors in board	Amin et al. (2022)
Firm size (FSIZE)	Natural log of total assets	Zaid et al. (2020)
Return on equity (ROE)	Total income divided by shareholders equity	Naseem et al. (2017)
Audit quality (AQ)	Dummy variable 1 used if audit from 4 larger firms and 0 used for other	Al-Matari (2017)
Board meeting (BM)	No. of board meetings during the year	Queiri et al. (2021)

Operational Model

$$FLEV=\beta_0+\beta_1MO+\beta_2INST+\beta_3FO+\beta_4BIND+\beta_5BGD+\beta_6MOBIND+\beta_7INSTBIND+\beta_8FOBIND+\beta_9MOBGD+\beta_{10}INSTBGD+\beta_{11}FOBGD+\beta_{12}FSIZE+\beta_{13}BSIZE+\beta_{14}ROE+\beta_{15}AQ+\beta_{16}BM+\varepsilon$$

Data Analysis and Findings

Table 2

Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
LEVERAGE	300	1.364	2.011	-6.562	16.034
MANG	300	0.281	2.889	0	50
INST	300	0.172	0.215	0	0.99
FOR	300	0.106	0.201	0	0.97
BIND	300	0.773	1.186	0	8
BGD	300	0.54	0.827	0	3
BSIZE	300	8.49	1.736	6	15
LnFSIZE	300	17.763	2.019	14.804	24.68
ROE	300	0.171	0.248	-1.398	1.791
AQ	300	0.83	0.376	0	1
BM	300	5.47	1.624	2	13

The mean value of leverage is 1.36 with Min value of -6.56 and the highest value is 16.034 which indicates that in Pakistan Stock Exchange (PSX) non-financial sector firms use more debt. A high debt ratio leads to high risk and instability in incomes due to high-interest payments. The study has discussed three kinds of ownership such as managerial ownership, INST ownership and FO. The minimum value of MO is 0 and the maximum value is 50 and the average is value 0.281. The mean of institutional shareholders is 0.172 per cent with a min value of 0 and max value of 99%. It means institutional ownership is the largest ownership in PSX. Foreign Ownership range from 0 to 0.97% and non-financial Pakistani companies have an average value of 0.11 percent. Independent directors are more or less missing in Pakistan before the implementation of the amended CG Code 2012. The importance of independent directors has been materializing after the implementation of this Code of CG.

However, some firms still do not include independent directors on board because they range from 0 to 8 per cent with the average mean is 0.77 per cent. The average value of Board Gender Diversity is 54% with a minimum value is zero and a maximum value is 3. This indicates that non-financial firms in PSX have low female directors in the boardroom. The firm size (FS) was measured by the natural log of assets. The mean value of firm size is 17.76 per cent with the lowest and highest values being 14.80% and 24.68% respectively. Board size shows the number of independent directors (IND) in the boardroom. The average indicates 9 directors on the board with min value of 0 and max value of 15 and a value of the standard deviation of 1.79 of non-financial Pakistani companies listed in KSE. The average value of ROE is 0.18 per cent having the lowest point of -1.40 per cent and the highest point of 1.79%. The average value of Audit Quality is 83%. The smallest value is 0 and the largest value is 1. This result shows that most firms listed in PSX conducted their audit through top audited firms. The mean value of the board meeting is 5.47 per cent with min value of 2 and a max value of 13.

Regression Analysis

Ordinary Least Square Regression Model

Table 3

Ordinary Least Square Regression Model

LEVERAGE	Coef.	P-Value
MANG	-0.013	0.03
INST	-0.163	0.78
FOR	-0.256	0.67
BIND	-0.065	0.57
BGD	-0.010	0.00
MANGBIND	0.399	0.7
INSTBIND	0.256	0.05
FORBIND	0.239	0.3
MANGBGD	6.435	0.02
INSTBGD	0.078	0.64
FORBGD	0.05	0.73
BSIZE	0.16	0.02
FSIZE	-0.000	0.04
ROE	-0.015	0.00
AQ	0.468	0.14
BM	0.125	0.09

R-squared=0.1567 Adj R-squared=0.109
Prob>F = 0

The results presented in Table 3 are based on the Ordinary Least Square (OLS) method. The R-square value, calculated through OLS, stands at 0.16. This OLS model suggests that 16% of the variation in Financial Leverage (FLEV) can be explained by the independent variables. The findings reveal that Managerial Ownership (MO) exhibits a statistically significant negative correlation with FLEV (Beta Value = -0.0134, P-Stats = 0.03). However, the relationship between institutional shareholding and FLEV is not statistically significant. The coefficient for foreign shareholding is also statistically insignificant (Beta Value = -0.256, P-Stats = 0.67).

When considering the presence of independent directors on the board, the association between independent directors and FLEV is statistically insignificant (Beta Value = -0.065, P-Stats = 0.57). On the other hand, the coefficient for Board Gender Diversity (BGD) shows a significant negative correlation with financial leverage (Beta Value = -0.010, P-Stats = 0.000).

The interaction term MOBIND, representing the interplay between director shareholding and independent directors, exhibits a positive relationship with leverage but is statistically insignificant (Beta Value = 0.399, P-Stats = 0.7). Similarly, INSTBIND, signifying the interaction between institutional shareholders and independent directors, shows a positive and significant association with FLEV (Beta Value = 0.239, P-Stats = 0.3).

FOBIND, capturing the interaction of foreign shareholders with independent directors, indicates a positive relationship with FLEV, yet this association is statistically insignificant. In the case of MOBGD, which considers the interaction between managerial shareholding and board gender diversity, a statistically significant negative relationship between the beta coefficient and FLEV is observed. Conversely, INSTBGD and FOBGD show a positive association with FLEV.

Random Effect Model

Table 4

Random Effect Model

LEVERAGE	Coef.	P-Value
MANG	-0.328	0.63
INST	-0.836	0.14
FOR	-0.373	0.58
BIND	-0.157	0.36
BGD	-0.281	0.36
MANGBIND	0.325	0.86
INSTBIND	0.195	0.15
FORBIND	0.216	0.3
MANGBGD	-0.019	0.51
INSTBGD	-0.144	0.36
FORBGD	-0.151	0.29
BSIZE	0.103	0.29
FSIZE	-0.000	0.27
ROE	-0.011	0.01
AQ	0.415	0.33
BM	0.058	0.41

R-sq: within = 0.0949 between = 0.0431 overall = 0.078

Table 4 presents the outcomes of the random effect model. The R-square value of 0.08 signifies that 8% of the variability in the dependent variable (FLEV) can be explained by variations in the independent variables, while the remaining 92% of the difference in the dependent variable is attributed to other factors. The results reveal an inverse relationship between most variables and FLEV.

Specifically, the study indicates a negative association between FLEV and independent variables such as director shareholding (Beta Value = -0.328, P-Stats = 0.63), institutional investors (Beta Value = -0.836, P-Stats = 0.14), and foreign shareholders (Beta Value = -0.373, P-Stats = 0.58). With respect to independent directors, the beta coefficient shows a negative correlation with FLEV (Beta Value = -0.157, P-Stats = 0.36). Conversely, the beta coefficient for female executives is statistically insignificant and demonstrates a negative correlation with leverage (Beta Value = -0.281, P-Stats = 0.36).

Regarding moderation, the coefficients of MOBIND, INSTBIND, and FOBIND exhibit a positive relationship with FLEV, but they are statistically insignificant (Beta Value = 0.325, P-Stats = 0.86, Beta Value = 0.195, P-Stats = 0.15, Beta Value = 0.216, P-Stats = 0.3) respectively. The beta coefficients of MOBGD, INSTBGD, and FOBGD show an inverse association with FLEV, and none of them achieves statistical significance (Beta Value = -0.019, P-Stats = 0.51, Beta Value = -0.0144, P-Stats = 0.36, Beta Value = -0.151, P-Stats = 0.29).

To assess the suitability of the OLS and random effect models, the Breusch and Pagan Lagrangian multiplier test for random effects is employed. The findings indicate that the random effect model performs better than the Pooled OLS model, with a Prob > chibar2 value of 0.0000.

Fixed Effect Model

Table 5

Fixed Effect Model

LEVERAGE	Coef.	P-Value
MANG	0.365	0.733
INST	-0.013	0.054
FOR	-0.173	0.828
BIND	-0.23	0.475
BGD	0.238	0.548
MANGBIND	0.974	0.815
INSTBIND	0.184	0.238
FORBIND	0.288	0.227
MANGBGD	0.551	0.877
INSTBGD	-0.246	0.172
FORBGD	-0.197	0.218
BSIZE	0.027	0.846
FSIZE	0.000	0.774
ROE	-0.011	0.024
AQ	0.371	0.542

LEVERAGE	Coef.	P-Value
BM	0.032	0.699
Prob > F = 0.0489		

The presented table illustrates the findings of the random effect model. While there exists a positive relationship between managerial shareholding and FLEV, this connection lacks statistical significance (Beta Value = 0.365, P-Stats = 0.733). Conversely, institutional shareholders exhibit a significant negative association with leverage, and the beta coefficient is statistically significant (Beta Value = -0.013, P-Stats = 0.05). However, the relationship between foreign investors and FLEV lacks significance (Beta Value = -0.173, P-Stats = 0.828). The correlation of independent directors with FLEV is negative, yet statistically insignificant (Beta Value = -0.23, P-Stats = 0.475). A positive association between BGD and FLEV is observed, although it is statistically insignificant.

Upon investigating the interactions of MOBIND, INSTBIND, and FOBIND, the coefficients of these variables demonstrate a positive relationship with FLEV, but they do not attain statistical significance (Beta Value = 0.974, P-Stats = 0.815, Beta Value = 0.184, P-Stats = 0.238, Beta Value = 0.288, P-Stats = 0.277). The beta coefficient of MOBGD indicates a positive correlation with FLEV, yet it lacks statistical significance (Beta Value = 0.551, P-Stats = 0.877). In terms of moderation, there is no significant association between INSTBGD and FOBGD with FLEV (Beta Value = -0.246, P-Stats = 0.172, Beta Value = -0.197, P-Stats = 0.218).

When considering control variables, the beta coefficient of board size exhibits a positive association with FLEV, but it is not statistically significant (Beta Value = 0.027, P-Stats = 0.846). Similarly, the relationship between firm size and FLEV is statistically insignificant (Beta Value = 0.000, P-Stats = 0.774). Conversely, the beta coefficient of ROE shows a negative correlation with FLEV and is statistically significant (Beta Value = -0.011, P-Stats = 0.02). There is a positive association between Audit Quality (AQ) and Board Meetings (BM) with FLEV, although these associations are not statistically significant (Beta Value = 0.371, P-Stats = 0.542, Beta Value = 0.032, P-Stats = 0.699).

To determine the preferable model for analysis, the Hausman test indicates that the fixed effect model is superior to the random effect model, with a probability lower than 0.05. The data reveal the presence of autocorrelation, indicated by a p-value < 0.05. To address this, the Wooldridge test is employed to analyze the occurrence of autocorrelation in the results. Additionally, the data exhibit heteroscedasticity, prompting the utilization of linear regression with correlated panels corrected standard errors (PCSEs) in the fixed effect regression model.

Application of Linear Regression with Correlated Panels Corrected Standard Errors (PCSEs).

Table 6

Linear Regress, Correlated Panels Corrected Standard Errors (PCSEs).

LEVERAGE	Coef.	P-Value
MANG	-1.345	0
INST	-0.175	0.74
FOR	-0.193	0.779
BIND	-0.074	0.263
BGD	-0.991	0.000
MANGBIND	0.209	0.517
INSTBIND	0.242	0.005
FORBIND	0.226	0.116
MANGBGD	-6.231	0.000
INSTBGD	0.072	0.595
FORBGD	0.052	0.78
BSIZE	0.185	0.012
LnSIZE	-0.065	0.007
ROE	-1.478	0.002
AQ	0.414	0.005
BM	0.135	0.162
R-squared = 0.1477 Prob > chi2 = 0.0000		

This model was employed to remove the autocorrelation problem that exists in data. Table 4.5 suggests the R-square value is 0.1477. It shows that only 15% of the change in the dependent variable can be explained by independent or explanatory variables and the rest of the 85% is affected by other factors which are not explored in this research study. So this model findings propose that corporate administration variables explain15% change in FLEV of firms registered in PSX. The outcomes propose that CG measures insignificantly affect the decisions of CS of the listed firm in PSX. The research results report that there is a significant negative relationship (β= -1.345, p=0.000) between managerial shareholding and FLEV. This research's findings line up with a principal-agent theory which proposes that alignment of interests between principal and agent can be reduced by increasing manager shareholding within a corporation and as a way to address principal-agent conflicts, this condition directly decreases the role of debt like a monetary tool.

The negative and insignificant association between institutional shareholding and foreign shareholding. The study findings document that there is a negative insignificant correlation between independent directors and FLEV (β=-0.074, p=0.26). The results recommend that low percentage of independent directors in non-financial companies in PSX. The results suggest that a lower ratio of independent directors in the boardroom cannot actively examine the board. Additionally, the outcomes exhibit that firms cannot take more loans from institutions due to a lower proportion of independent directors in the boardroom. The findings report a negative association between the beta coefficient of BGD and FLEV, but strong and statistically significant (β=-0.991, p=0.000). The results reveal that the presence of a female leader on the board emphasises retained earnings and leads to lower financing through the debt market. Additionally, a lower percentage of female executives in Pakistani firms are listed on PSX.

The interaction between manager shareholding and board independence is indicated by MOBIND. This moderating effect has a positive association with FLEV (β= 0.209, p=0.517). The study's findings document that the association of managerial ownership with leverage is not effective due to the lower proportion of independent directors on the board. Commonly, the outcomes suggested that there is a need to augment the existing involvement of outside directors in PSX-listed firms. Therefore, agency problems can be removed by enhancing the proportion of independent directors in the boardroom. INSTBIND is the interaction of institutional investors and independent directors. This moderation shows positive and significant outcomes (β= 0.242, p=0.005) which suggests that institutional investors compel manager shareholders and foreign investors to enhance debt financing activities. FOBIND indicates the relationship of foreign investors with independent directors. The study's findings demonstrate that moderating role of independent directors is positive but statistically not significant (β=0.226, p=0.116).

MOBGD indicates the interaction of manager ownership and board gender diversity. There is a negative significant moderating effect of BGD between managerial shareholding and FLEV (β=-6.231, p=0.000). It indicates that female leaders give more focus on retained earnings rather than debt finance extensive limit on debt finance. The moderating effect of BDG in the association of institutional investors to FLEV and foreign investors with FLEV is positive but statistically not significant respectively (β=0.072, p=0.595, β=0.052, p=0.78). The outcomes propose that due to lower proportion of women executives in boardrooms weak this relationship. Generally, results show the significance of augmenting the inclusion and involvement of women leaders in PSX list firms.

Conclusion

The aim of this research study was to explore how board governance moderates the relationship between ownership structure and firms' capital structure (CS), focusing on companies listed on the PSX during the period 2014-2018. The study employed various models, including Ordinary Least Squares (OLS), Fixed Effect (FE), and Random Effect (RE). To address issues related to autocorrelation and heteroscedasticity, the Linear Regression method with Correlated

Panels Corrected Standard Errors (PCSEs) was utilized

The findings revealed that managerial shareholding negatively influences Financial Leverage (FLEV), indicating a reduced reliance on debt financing. The impact of institutional and foreign investors on FLEV is also negative, suggesting that firms with lower proportions of these types of investors tend to have lower debt levels. Additionally, a negative correlation between the proportion of independent directors (IND) and FLEV suggests that boards with a higher ratio of independent directors are inclined to opt for lower debt financing due to their effective monitoring and control abilities.

Contrastingly, the study found that firms with a higher proportion of female directors tend to opt for lower debt financing, while those with fewer female administrators are more likely to rely on higher debt financing. The results highlighted the significant moderating effect of the interaction between institutional investors and board independence (INSTBIND) and the interaction between foreign investors and independent directors (FOBIND), indicating that these interactions encourage higher levels of debt financing.

The moderating effect of board gender diversity (BGD) and its interaction with managerial ownership (MOBGD) revealed a negative significant relationship between manager shareholders and FLEV, suggesting that female executives prefer internal sources of finance and exert more influence over the debt-equity structure. Similarly, the interactions of board gender diversity with institutional ownership (INSTBGD) and foreign ownership (FOBGD) displayed a positive moderating effect of female administrators, influencing firms' decisions towards lower levels of debt financing when the proportion of female leaders is higher.

This research aimed to provide a comprehensive and insightful analysis of how board governance elements, such as independent directors and female leadership, moderate the relationship between ownership structure and CS. However, like other studies, this research also has certain limitations.

Limitations and Future Recommendations

The first limitation of the study was merely limited to listed companies in PSX. Thus outcomes should be supported only by the Pakistani business environment. Therefore, our empirical results may not be generalized globally. Therefore, further research can focus on panel data studies of other nations.

The second limitation is that our study contains only non-financial sector companies. The study of financial firms is also a significant gap that required to be addressed.

The third limitation is that only a few corporate governance variables and incomplete ownership structures were discussed. Further governance attributes such as CEO compensation, board remuneration, firm age, board composition etc may be included in future studies. Other ownership structures like family ownership, state ownership, and ownership concentration may be included in future studies.

Finally, to test the hypotheses Pooled OLS model has been used in this study. However, for cross-sectional and time series observations panel data analysis may perhaps give a more realistic behavioral model. PCSEs model is used to overcome the autocorrelation and heterosketaty issue. Therefore, in order to reduce the potential biases the prospective research should examine the model of this study with a wide array of techniques of panel data. To remove the endogeneity issue 2SLS and GMM models are used for future study.

Practical Implications

This study holds few practical implications for investors, specifically in the Pakistani context, an emerging nation, that is challenged by political volatility and instability. The expected outcomes of the corporate administration are aimed at developing the confidence of investors and attracting overseas investors. The execution of a stringent company administration system in listed companies will help in enhancing debtholders' confidence and guarantee the protection of their investment.

Additionally, the inclusion of outside directors and female leaders on the board boosts the investors' level of satisfaction resulting in greater accessibility of finance for business. The results, therefore; provide a direction for financiers to assess better opportunities for their investments (Amin et al., 2022). A comparatively bigger size of the board with more proportion of outside directors puts greater pressure on top-level management to follow a policy of more debt and thereby the value of the firm increase through a rigid and effective controlling system (Zaid et al., 2020). Furthermore, toward updating CG practices, regulatory bodies, policymakers, and practitioners should give more attention to international issues.

In addition, for a strong CG mechanism, a varied ownership structure is very important. Thus, it is suggested that enforce compulsory adoption of well-diversified ownership structure for corporations. Furthermore, close monitoring of shareholders who give preference to short-term returns over long-term gain and well-being of the firm is recommended. Regarding policy implications, the outcomes of the study present important insights into tactics that companies can use to raise their level of debt. The outcomes propose that the inclusion of independent directors and female directors in the boardroom guide to enhancing the availability of debt for the company because it improves the debtholders' confidence. Additionally, the outcomes show that companies having a higher percentage of independent directors are tending to issue more debt. The incorporation of IND into the boardroom gives up important benefits in terms of healthy financial markets. To mitigate principal-agent conflicts and enhance investor confidence, this study highlights the requirement of applying further corporate administration reforms. This focuses on the significance of addressing these topics proactively to promote a more healthy and reliable business atmosphere. Additionally, the clear financial advantages of women leaders in executive positions call upon business schools and professional institutes to aggressively support females in increasing their professional expertise and positioning themselves for such roles. This practical approach can add to more gender diversity and boost the overall performance of the company.

Theoretical Implication

The relations of CG dimensions, mainly "board characteristics like independent directors and female directors" may improve the process of strategic decision. This means attributes of the board are more probably to have a more effect on company financing decisions as they are relating to "a more percentage of independence board and gender diversity" (Zaid et al., 2020).

In conclusion, the research can provide a foundation intended for future research pertaining to "OS and FLEV," mainly in emerging nations. More particularly, the study persuades researchers for further research in future on CS to examine the effect of other aspects of OS on the financing decisions of firms and theoretically examine other noteworthy moderators, such as investigating the interactive effect of women CEOs on CS. Furthermore, to get an inclusive understanding and in detail insights into the CS among examined companies, the research gives confidence to researchers to employ more than one ratio in quantifying the CS of companies.

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