

Corporate Governance, Capital Structure and Profitability: A Study on the Banking Sector of Bangladesh

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Abstract: *This paper aims at investigating the influence of corporate governance on the leverage decisions and profitability of the banking sector of Bangladesh. Using Feasible Generalized Least Squared (FGLS) regression model, we find that corporate governance mechanisms (both ownership structure and board of directors' perspectives) have a significant influence on capital structure decision and profitability of the private commercial banks in Bangladesh. This study reveals that the leverage ratio is negatively related to the number of board meetings, institutional and public shareholding. Contrarily, profitability is positively influenced by the board size and institutional shareholding, whereas negatively influenced by the number of audit committee meetings and independent directors.*

Keywords: *Corporate governance, Capital structure, Leverage, Profitability, Bangladesh*

1. Introduction

Corporate governance, capital structure and profitability are very intimately related. Defining the mode of financing is the core question of the corporate finance. A number of researchers have been working to determine the perfect capital structure balance and the factors that actually influence the capital structure of a firm (Rajan and Zingales, 1995; Chowdhury, 2004; Lima, 2009; Siddiqui, 2012; Hossain, 2016; Hossain and Hossain, 2015 and so on). This determination of the financing model is of great importance as the value and riskiness of the company depends on it. A proper capital structure ensures sustainability, profitability, and achievement of strategic goals of a company (Hossain and Hossain, 2015; Hossain, 2016). So it is vital to determine which factors act as the catalysts to the determination of the capital structure. In this paper, we try to identify whether corporate governance mechanisms influence the capital structure decisions of firms.

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Corporate governance is the rules and regulations that are used to control and direct any company. These are the set of corporate principles that help a company to be run properly. Corporate governance is important because it not only encompasses the interests of the stakeholders but also practically defines how the management perceives the business practices. Capital structure, on the other hand, is a completely different yet related concern that deals with the financial needs and growth issues. The dilemma between the debt financing and equity financing and what would be the optimum balance between these two have been debated for a long time. In this paper, we attempt to identify how various dimensions of corporate governance affect the firms' leverage preferences. There has been disagreement among the results of various researchers' works regarding this relation between corporate governance mechanisms and leverage decisions, which motivates us to further delve into this issue.

In this study, it is also strived to show if there is any relationship between corporate governance mechanisms and the profitability of the commercial banks in Bangladesh and if any, what factors are motivating the results. Because it is very much important for the stakeholders, especially the top management of the banks to know if there is any influence of corporate governance on the financial performance of the banks. A number of research on the impact of corporate governance on the capital structure and firm performance have been done in the developed countries (Pfeffer, 1973; Pfeffer and Salancick, 1978; Lipton and Lorsch, 1992; Berger, 1997; Shleifer and Vishny, 1997; Anderson et al., 2004; Coles et al., 2005; Wen et al. 2002; Gompers et al., 2003; Achchuthan et al., 2013 and so on). But there is limited research on this topic from Bangladesh perspective. Imam and Malik (2007) showed the impact of corporate governance, focusing on the ownership structure, on the performance and dividend payout policy of all listed non-financing firms in Bangladesh from two cross sectional viewpoints 2000 and 2003. This paper does not focus on the corporate governance from board of directors' perspective and it measures the firm performance from market perspective such as holding period return and Tobin's Q and furthermore, it is based on the manufacturing sector, not the bank sector. On the contrary, though the study of Alam and Akhter (2017) investigated the effect of corporate governance mechanisms on performance of commercial banks in Bangladesh by taking 14 sample banks for a period of 10 years ranging from 2006 to 2015, it focused on corporate governance from only the board of directors' perspective.

Thus, the contribution of our study to the extant literature is unique in the sense that unlike the previous studies, this study combines the two perspectives of corporate governance (i.e. board of directors' perspective and ownership structure perspective) at a time along with a robust data set (242 bank-year observations: 22 private commercial banks covering 11 years time frame 2006-2016) and sophisticated econometric methodology. This study focuses particularly on the banking sector of Bangladesh to

determine whether the corporate governance is an effective determinant of capital structure and profitability.

The rest of the paper is structured as follows: Section two discusses the literature review, Methodology is presented in section three and section four demonstrates the analysis of results and then the paper concludes with policy implications.

2. Literature review

2.1 International Evidence

2.1.1 Corporate governance and Capital structure

Through the study of Modigliani and Miller (1958), the foundation of the capital structure issues was laid. They assumed a perfect world and proved that without the existence of the tax, the capital structure is irrelevant to the firm's value. This famous "MM theory of irrelevance" proposition was opposed and disagreed by many types of research as the real-world scenario is quite different having tax shield and bankruptcy costs in the picture. A later study (Modigliani and Miller, 1963) was conducted adding tax assumption to the model and this time the study showed that having a taxshield in the picture, the debt constituting firms were valued more than the equity financing-based firms. Later, Myers (1984) came up with the trade-off theory which depicts that the optimum capital structure is determined by the choice between the higher and lower leverage followed by the advantages of tax leverage and bankruptcy risk of high debt structure.

Another theory called Pecking Order theory (Myers et al.1984) states that the availability or asymmetry of information is one of the biggest catalysts to the firms' choice of financing mode. As the information asymmetry increases, the tendency of the firm also increases to cover its financing through equity. The Free Cash flow theory (Jensen, 1986) was introduced later which points out that the use of debt financing increases the firm value irrespective of the potential threats of the financial distress as the operating cash flows overflow the investment opportunities of the firm. These are the major theories that deal with the determinants of the capital structure. Later many other studies were conducted to confirm these findings. In case of the impact of the corporate governance in case of the capital structure, the results of various researchers have been inconclusive. In the years of research, the main variables used by the researchers to proxy the corporate governance have been found as follows: the board size, CEO duality, number of independent director, the ownership structure and compensation of the board members (Achchuthan et al., 2013).

The board of directors is responsible for the management and overseeing the firms' policies and regulation. The studies done by Pfeffer and Salancick (1978), and Lipton and

Llorsch (1992) identified that there is a strong significant relationship between the membership number of the board and the capital structure. In the latter studies, the directional relationship between the capital structure and corporate governance was established. Berger (1997) indicated that firms with the larger board have low leverage. They concluded that a large board has the higher power or authority to pressurize the managers to pursue a lower debt structure to increase the firm performance and decrease the risk. Jensen (1997), however, has found a rather positive relation between the board size and the capital structure. He argued that the larger board companies generally operate in highly regulated industries which make them pursue larger debt structure or the company to be profitable or to raise the company value. Another reason is that due to the larger board size, it is sometimes difficult to reach undisputed decisions and the disputes resulting from the higher board size weakens the corporate governance followed by a higher leverage. Later studies of Anderson et al. (2004), Coles et al. (2005), and Rehman et al. (2010) also found a significant positive relationship between the board size and the capital structure.

Pfeffer (1973), and Pfeffer and Salancick (1978), using the resource dependency approach, found that the external directors have the ability to enhance a firms' sturdiness against the outside environment which increases the ability to acquire loans and reduce uncertainty. As a result, the higher the outside director's number are, the more leveraged based the company's operations are. These findings have been confirmed by the other researchers as well. Jensen (1986), Berger et al. (1997) and Abor (2007) also found that, the ability of the firm to finance from the outside sources increases resulting in a higher leverage structure. But other researchers have also found negative relationships between these two factors. First, it was exhibited by Wen et al. (2002) who found a significant negative relationship between the number of independent directors and leverage of a firm. It was argued that as the number of the independent director increase, the pressure on the management increases as well for persuading a lower leveraged structure to increase the firm performance and lower the risk. The monitoring of the management increase and the independent directors tend to lower the financial leverage increasing the value of the equity.

CEO duality refers to the state of leadership in a company where the management head or the CEO and the Chairman of the board is the same person. This variable has first been added by Fama and Jensen (1983) who indicated that there is a strong relationship between the CEO duality and the capital structure of the firm. Later Fosberg (2004), Vaklifard et al. (2011) found a positive relationship between these two variables. This variable, however, is not used in this paper since the CEO duality in the banking sector of Bangladesh has been legally prohibited.

The proportion of ownership structure is also an important variable in the controlling the corporate governance indirectly. This was exhibited by Short et al. (2002) who found that the relationship between the management ownership of the firm is not very significantly related to the capital structure. As the outside or institutional shareholding increases, they affect the cost of equity financing and debt financing. In many organizations, the large equity holders have seats on the board and thus have the ability to control the firms' decision about the capital structure. The study found a negative relationship between the firm's institutional shareholding and capital structure. As the large external owners are more conservative about the riskiness of the company and thus seeks to minimize the risk by pursuing a lower leverage capital structure. Chaganti and Damanpour (1991), however, found no significant relationship between these two variables.

2.1.2 Corporate governance and firm performance

Corporate governance oversees the soundness of the firm in the context of management and operations. As a result, it may influence a firm's performance positively. According to Jensen and Meckling (1976), better corporate governance builds a cost-effective structure for the firm and thus increases the firm's performance. Shleifer and Vishny (1997) showed that the corporate governance and firm performance are strongly and positively related. They argued that the better-governed firms are more likely to invest in more profitable projects and thus has higher expected future returns. The approach of Gompers et al. (2003) shows that the corporate governance and firm performance in the context of Net Profit Margin and Return on Equity are positively related to the US firms.

According to the pecking order theory, the profitability of the firm is very often negatively related to the external debt financing (Myers et al., 1984). The retained earnings are favored over the debt financing in the event of a conflict of interest between the internal or equity and external or debt financing providers (Suto, 2003). According to Rajan and Zingales (1995), this relationship may be positive as well because the more profitable firms have the most favorable opportunities for debt financing. Myers (1977) also related this relationship positively in the context of growth opportunity. As a firm is becoming profitable, it has better growth opportunity and to meet up the growth opportunity, internal financing may be insufficient and as result, the firms go for external financing.

2.2 Evidence from Bangladesh

There is limited research on the impact of corporate governance on capital structure and profitability of the banking sector of Bangladesh. Imam and Malik (2007) showed the ways corporate governance is practiced through ownership structure and its influence on the performance and dividend payout policy of all listed non-financing firms in Bangladesh from two cross sectional viewpoints 2000 and 2003. They concluded that

there is a significant positive nexus between foreign holding and firm performance, and moreover, high institutional ownership firms pay high dividend whereas concentrated ownership pay less dividend.

Alam and Akhter (2017) investigated the effect of corporate governance mechanisms on performance of commercial banks in Bangladesh by taking 14 sample banks for a period of 10 years ranging from 2006 to 2015. They used four corporate governance tools such as Board Size, Board Independence, Internal Audit Committee Members and Capital Adequacy Ratio (CAR) and measured bank performance by Return on Asset, Return on Equity and Earnings per share. The study finds that Board size, number of independent directors and number of internal audit committee members are inversely related to bank performance. Moreover, they found a linear relation between capital adequacy ratio and return on asset but non-linear relation between CAR and other two performance measures- return on equity and earnings per share.

Haque et al. (2011) conducted a study on Bangladesh regarding the impact of corporate governance on the capital structure of the Bangladeshi firms. They found that agency theory is confirmed by their results where the poor governance of corporate regulations was followed by a higher debt ratio. In case of the profitability study on the firms, the pecking order theory was confirmed by the researchers where the profitably had a negative relationship with the debt ratio.

Using Panel Corrected Standard Error Regression Model and Random Effects Tobit Regression Model on a panel dataset including 74 manufacturing companies listed under 8 industries in Dhaka Stock Exchange (DSE) for the period of 2002-2011, Hossain and Hossain (2015) found that managerial ownership positively affect the capital structure. In an another study, Hossain (2016) analyzed the Bangladeshi companies based on a strongly balanced panel data of 81 manufacturing companies listed under 10 industries in Dhaka Stock Exchange for 2002-2014 and found that managerial ownership positively affects profitability.

However, in a cross-sectional study in the context of the determinants of capital structure in Bangladeshi and Japanese firms, Chowdhury (2004) showed that in Bangladesh, agency cost of debt, profitability, asset growth rate, operating leverage, and bankruptcy risk has a significantly strong relationship with the capital structure. Later, the studies of Lima (2009), Sayeed (2011), and Siddiqui (2012) provided evidence that growth rate, operating leverage, debt service capacity, age and size of the firms have a significant impact on the capital structure decisions of the financing and non-financing firms in Bangladesh.

3. Methodology

3.1 Data and Sample

The study is based on secondary data collected from various reliable sources such as the yearly financial statements and various financial reports of the selected listed banks over the period of 2006-2016. Out of 32 listed private commercial banks in Dhaka Stock Exchange (DSE), 22 have been selected for the study because they satisfy the time period (2006-2016) of the study. The study excluded only the private commercial banks as the Government banks and Islamic Shariah-based Commercial Banks since they have a different corporate governance approach.

3.2 Measurements of the Variables

This study uses various indicators of the board of directors' perspectives and ownership structure perspectives of the banks as the proxies for corporate governance. Furthermore, it uses debt-equity ratio as the proxy for capital structure and Return on Assets (ROA) and Return on Equity (ROE) as the proxies for the profitability of the banks (Table 1).

Table 1: Measurement of the variables

Variable Indicator	Full name of the variables	Measurement (Proxy)
<i>Corporate Governance variables (Independent Variables)</i>		
Brdsz	Board Size	Number of the board member
BM	Board meeting	Number of Board meeting
ACM	Audit committee meeting	Number of audit meeting
IndDir	Independent directors	Number of independent directors
FD	Female directors	Number of female directors
Inst	Institutional Shareholding	Percentage of Institutional shareholding
Public	Public Shareholding	Percentage of public shareholding
Sponsor	Sponsors Shareholding	Percentage of sponsor shareholding
Govt.	Government Shareholding	Percentage of Govt. shareholding
<i>Capital Structure variable (Dependent Variable)</i>		
LR	Leverage ratio	Total debt/total equity
<i>Profitability variables (Dependent Variable)</i>		
ROA	Return on Asset	Income before provision and tax/Total Asset
ROE	Return on equity	Net Income/Shareholder's Equity

<i>Control Variables</i>		
Size	Size	Natural logarithm of the asset size
Age	Age	No. of age since the established period
AGR	Asset Growth rate	(Asset of year 1- Asset of year 0) / Asset of year 0

3.3 Expected signs

Various researchers have found different and inconclusive results regarding the relationships between corporate governance and leverage as well as profitability. Based on the previous studies, the expected signs of the independent variables for each dependent variable are represented in the following Table 2.

Table 2: Theoretically expected signs of independent variables

Sl. No.	Variable Indicator	Full name of the variables	Expected signs	
			Leverage	Profitability
1	Brdsz	Membership number of the board	+/-	+
2	BrdMeet	Number of Board meeting	+/-	+
3	AudComMt	Audit committee meeting Number	+/-	-
4	IndDir	Number of independent directors	+/-	-
5	FemDir	Number of female directors	-	+/-
6	Inst	Shareholding by large Institutions	-	+
7	Public	Shareholding by Public	+	-
8	Sponsor	Shareholding by Sponsors	+	+
9	Govt	Shareholding by Government	-	-
10	Size	Size of the company	+/-	+
11	Age	Age of operations	-	+
13	AGR	Asset Growth rate	+/-	+/-

3.4 Specification of the Model

In this study, Feasible Generalized Least Square (FGLS) regression model has been used to determine the impact of corporate governance on leverage and profitability of the commercial banks in Bangladesh. FGLS allows estimation in the presence of AR(1) autocorrelation within panels and cross-sectional correlation and heteroscedasticity across panels (Greene, 2012). The reason for using this model is that it provides the best estimates for the variables by automatically correcting the heteroscedasticity and autocorrelation problem. This model can be expressed panel by panel as:

$$\begin{bmatrix} y_1 \\ y_2 \\ \cdot \\ \cdot \\ y_n \end{bmatrix} = \begin{bmatrix} x_1 \\ x_2 \\ \cdot \\ \cdot \\ x_n \end{bmatrix} \beta + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \cdot \\ \cdot \\ \varepsilon_n \end{bmatrix} \dots\dots\dots(1)$$

This regression model is modified into three forms based on three dependent variables as follows:

Model I: Impact of Corporate Governance on Leverage:

$$LR = \alpha + \beta_1 Brdsz_{i,t} + \beta_2 BM_{i,t} + \beta_3 ACM_{i,t} + \beta_4 IndDir_{i,t} + \beta_5 FD_{i,t} + \beta_6 Inst_{i,t} + \beta_7 Public_{i,t} + \beta_8 Sponsor_{i,t} + \beta_9 Govt_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} Age_{i,t} + \beta_{12} AGR_{i,t} + \beta_{13} ROA_{i,t} + \beta_{14} ROE_{i,t} + \varepsilon_{i,t} \dots\dots\dots(2)$$

Model II: Impact of Corporate Governance on Profitability (ROA):

$$ROA = \alpha + \beta_1 Brdsz_{i,t} + \beta_2 BM_{i,t} + \beta_3 ACM_{i,t} + \beta_4 IndDir_{i,t} + \beta_5 FD_{i,t} + \beta_6 Inst_{i,t} + \beta_7 Public_{i,t} + \beta_8 Sponsor_{i,t} + \beta_9 Govt_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} Age_{i,t} + \beta_{12} AGR_{i,t} + \beta_{13} Leverage_{i,t} + \varepsilon_{i,t} \dots\dots\dots(3)$$

Model III: Impact of Corporate Governance on Profitability (ROE):

$$ROE = \alpha + \beta_1 Brdsz_{i,t} + \beta_2 BM_{i,t} + \beta_3 ACM_{i,t} + \beta_4 IndDir_{i,t} + \beta_5 FD_{i,t} + \beta_6 Inst_{i,t} + \beta_7 Public_{i,t} + \beta_8 Sponsor_{i,t} + \beta_9 Govt_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} Age_{i,t} + \beta_{12} AGR_{i,t} + \beta_{13} Leverage_{i,t} + \varepsilon_{i,t} \dots\dots\dots(4)$$

4. Preliminary Tests

4.1 Results of Unit Root Test

A unit root is a distinctive feature in the probability or regression modeling involving stochastic processes that cause data to produce misleading or statistically inaccurate results in time series data. To produce unbiased results, a data set must not contain unit root, which means the dataset should be stationary. Three types of unit root tests such as Levin-Lin-Chu test, Harris-Tzavalis test and Im-Pesaran test have been performed on the variables in levels to identify if the panels contain unit roots. From the results of the unit

root test in Table 4, it can be seen that the audit committee meeting, Independent directors, Sponsor shareholding, and Govt. shareholding exhibit unit root problem. So, a second test namely the Harris-Tzavalis unit-root test has been performed to check if they pass on that test. This test exhibits that all the variables are free of unit root problem except for the Age and Size variable which were previously detected as unit root free variables. But these variables are lognormal of original values and this Harris-Tzavalis unit-root test model has limitations in examining the log values.

Table 4: Results of Unit root test

Variables	Levin-Lin-Chu	Harris-Tzavalis	Im-Pesaran
Brdsz	0.0073***	0.0000***	0.0000***
BrdMeet	0.0000***	0.0000***	0.0000***
AudCmtMeet	0.0898*	0.0000***	0.0016***
IndDir	0.9533	0.0000***	0.9981
FemDir	0.0103**	0.0000***	0.0000***
Inst	0.0000***	0.0000***	0.0000***
Public	0.0029***	0.0000***	0.0000***
Sponsor	0.2458	0.0000***	0.0470**
Govt	1.0000	0.0028***	0.0441**
Age	0.0000***	0.9977	0.0000***
Size	0.0000***	0.9985	0.0023***
ROA	0.0364**	0.0000***	0.0000***
ROE	0.0000***	0.0000***	0.0000***
Growth	0.0000***	0.0000***	0.0000***
Leverage	0.0000***	0.0002***	0.0002***

*Note: Here, ***, **, and * represent 1%, 5% and 10% level of significance respectively.*

So a third test has been performed to finally examine if the variables that showed unit root problem in either prior tests also shows unit roots in this model. For this purpose, Im-Pesaran-Shin unit-root test has been used for the certain variables. Only the Independent director variable shows the unit root problem and it has already been found

stationary in the Harris-Tzavalis test. Hence, overall it can be said that all the variables are free from unit root problem.

4.2 Multicollinearity, Heteroscedasticity & Autocorrelation Tests

Multicollinearity has been tested using VIF multicollinearity test. According to Gujarati (2003), any variables that contain a VIF value of 10 or higher should be dropped from the equation or model or there is high chance that, the model will suffer from multicollinearity problem. Since no variable has VIF value more than 10, it can be concluded that there is no multicollinearity problem in the data set (Table 5).

Table 5: Results of multicollinearity test using Variance Inflation Factor (VIF)

Variables	VIF
Sponsor	8.91
Public	7.76
Inst	3.44
Age	3.27
Size	3.16
Govt	1.95
BrdMeet	1.59
IndDir	1.52
Growth	1.44
FemDir	1.21
AudCmtMeet	1.16
Brdsz	1.14

The Wooldridge test for autocorrelation in panel data has been used to determine if there is autocorrelation in the data set and the results (Table-6) reveal that the data set suffers from autocorrelation problem.

Table 6: Wooldridge test for autocorrelation

Model 1: Impact of CG on Capital structure	
H ₀ : no first-order autocorrelation	
F(1, 21) = 52.047	Prob> F = 0.0000***

Model 2: Impact of CG on Profitability (ROA)	
H ₀ : no first-order autocorrelation	
F(1, 21) = 2.256	Prob> F = 0.1480
Model 3: Impact of CG on Profitability (ROE)	
H ₀ : no first-order autocorrelation	
F(1, 21) = 6.262	Prob> F = 0.0206**

Note: Here, ***, and ** represent 1%, and 5% level of significance respectively.

To test for heteroscedasticity, the Breusch-Pagan test is used in this study and the results in Table 7 show that the data set has heteroscedasticity problem since we reject the null hypothesis at 1% significance level.

Table 7: Results of Breusch-Pagan test for heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity	
H ₀ : Constant variance	
chi ² (13) = 46.95	Prob> chi ² = 0.0000

5. Analysis of Results:

5.1 Descriptive Statistics

It is evident from Table- 8 that the private commercial banks, during the study period 2006-2016, have approximately 14 members on an average in the board of directors and the minimum number of directors is 6 whereas maximum number is 26. On an average, 20 board meetings were held in the banks every year with the highest number of meetings 57 in Pubali Bank Ltd. in year 2010. Approximately 8 meetings of audit committee were held per annum during the period with highest number of 41 meetings in Premier Bank Ltd. in 2011. Although there is a mandatory provision of having independent director in the board of the banks, there are several banks which had no independent directors in any year during the study period and on average the number of independent director is 1.29. In case of female director, the average number is 1.52 and some banks don't have female directors whereas maximum 6 female directors were in the board of Prime Bank Ltd in 2006.

Table- 8: Descriptive Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum	Observations
Brdsz	13.56	3.84	6	26	242
BrdMeet	20.06	9.34	5	57	242
AudCmtMeet	8.08	5.66	2	41	242
IndDir	1.29	1.37	0	5	242
FemDir	1.52	1.38	0	6	242
Inst	0.1725	0.1352	0	0.6458	242
Public	0.4197	0.1969	0	0.9567	242
Sponsor	0.3792	0.1913	0	1	242
Govt	0.0175	0.07	0	0.35	242
ROA	0.0322	0.0090	0.0100	0.0664	242
ROE	0.1668	0.0763	0.0267	0.6170	242
Growth	0.2172	0.1210	-0.0501	0.7784	242
Leverage	0.9187	0.0206	0.8457	0.9650	242

As far as ownership mix is concerned, it is vivid that public shareholding (on an average 41.97%) is the most dominant shareholding entity, which is followed by the second powerful shareholding group, sponsors (37.92%) and institutional shareholding (17.25%) respectively. In the private commercial banks, the government has the least amount of shareholding (only 1.75%) with the highest 35% govt. shareholding in IFIC bank ltd. Here it is clear that the banks return on asset (3.22%) is comparatively lower than the return on equity (16.68%) due to the fact that the banks have lower equity and in their capital structure. Since the banks mainly collect their required funds through deposits, it is not surprising that their leverage ratio is on an average about 91.87% with minimum 84.57% and maximum 96.50% leverage.

5.2 Results of Feasible Generalized Least Square (FGLS) Model:

Feasible Generalized Least Square (FGLS) model is used in this study to find out whether the corporate governance mechanisms are significant determinants of leverage and profitability of the private commercial banks in Bangladesh. The regression results of three models are illustrated below in Table- 9 and 10.

5.2.1 Impact of Corporate Governance on Capital structure

Table 9 shows that among the corporate governance variables, the number of board meetings negatively affects the leverage ratio and this result is significant at 10% significance level. The negative coefficient of the variable represents that, a higher degree of corporate governance represented by a number of board meetings discourages the aggressive leveraged capital structure. In case of the board meeting, most of the

researchers have not found any significant relationship between the number of the board meeting held and capital structure. However, Shafana (2015) found a strong relationship between the two variables.

Table 9: FGLS regression results of Model- I (Leverage)

Variables	Coefficients	z	P> z
Brdsz	0.0001	-0.5200	0.6040
BrdMeet	-0.0002	-1.6800	0.0930*
AudCmtMeet	-0.0001	-0.4500	0.6500
IndDir	-0.0001	-0.4700	0.6380
FemDir	-0.0007	-0.8500	0.3960
Public	-0.0152	-2.6400	0.0080***
Inst	-0.0162	-2.4700	0.0130***
Govt	0.0222	1.2000	0.2290
Age	0.0074	1.9200	0.0550**
Size	-0.0100	-5.3900	0.0000***
Growth	0.0271	5.4900	0.0000***
ROA	-0.6002	-12.1200	0.0000***
Cons	1.1794	27.0800	0.0000

*Note: Here, *, ** and *** represent 10%, 5% and 1% significance level respectively.*

For the ownership structure based CG variables, the proportion of public shareholding and institutional shareholding has a significant negative impact on the capital structure of the banks at 1% and 5% significance level respectively. This result is supported by the studies of Short et al. (2002), Keasey and Duxbury (2002) who found that as the outside or institutional shareholding increases, they affect the cost of equity financing and debt financing. In many organizations, the large equity holders have seats on the board and thus have the ability to control the firms' decision about the capital structure. As the large external owners are more conservative about the riskiness of the company and thus seeks to minimize the risk by pursuing a lower leverage capital structure. And as the public shareholding increases, the firms tend to follow a lower risk option to operate the business under the risk adverse stimulus of the public owners.

Among the control variables, this study finds that the banks with higher age of operations and higher growth opportunities tend to take more leverage. On the contrary, banks having larger assets and higher profitability are reluctant to take more leverage in their capital structure.

5.2.2 Impact of Corporate Governance on Profitability (ROA and ROE)

In both Model II and III of Table 10, board size is found to have significant positive impact on both Return on Assets and Return on Equity. This finding is consistent with the studies of Lishenga (2012), Gompers et al. (2003) and Shleifer and Vishney (1997). The reason behind this positive relationship may be due to the fact that higher number of

board members adds to the overall board competence and thus helps to maximize the performance of the banks. However, this result is contradictory with the study of Alam and Akhter (2017).

Table 10: FGLS regression results of Model- II and III

Variables	Model 2 (ROA)			Model 3 (ROE)		
	Coefficients	z	P> z	Coefficients	z	P> z
BrdSz	0.0002	2.2200	0.0260**	0.0026	1.7800	0.0760*
BrdMeet	0.0000	-0.0900	0.9280	0.0000	-0.0100	0.9910
AudCmtMeet	-0.0002	-3.8000	0.0000***	0.0001	0.0700	0.9420
IndDir	-0.0003	-2.9700	0.0030***	-0.0046	-3.2600	0.0010***
FemDir	0.0006	1.6700	0.0940	-0.0033	-0.7700	0.4420
Inst	0.0069	3.0400	0.0020***	0.0068	0.2000	0.8390
Govt	0.0028	0.6200	0.5350	0.1257	1.5600	0.1200
Age	0.0009	0.5500	0.5830	0.0203	1.3400	0.1810
Size	-0.0057	-5.3000	0.0000***	-0.0649	-4.3300	0.0000***
Growth	0.0090	4.3100	0.0000***	0.1029	2.9200	0.0040***
Leverage	-0.1844	-9.0800	0.0000***	-0.7148	-2.6600	0.0080***
Cons	0.3370	10.2000	0.0000***	2.3465	4.6500	0.0000***

Note. Here, *, ** and *** represent 10%, 5% and 1% significance level respectively.

The numbers of audit committee meeting (Model II) and independent directors (both Model II and III) have negative influence on profitability of the banks. This can be explained by the fact that the overseeing of the audit committee and conservative as well as risk-averse mentality of the independent directors are followed by low risk and low return operations by the firms. This finding is consistent with the study of Alam and Akhter (2017).

In Model 2, institutional shareholding has been found to be positively affecting the Return on Assets of the banks at 1% significance level. This result can be explained by the higher risk-taking mentality of the institutional shareholders followed by higher return. As for Model 3, no ownership structure variable is found to be significant.

Among the control variables, the results reveal that the banks having higher growth opportunities can earn more profits (both ROA and ROE) whereas larger sized and highly leveraged banks have lower profitability.

6. Conclusion and Policy Implications

This study's prime objective is to examine the impact of corporate governance (both board of directors and ownership mix perspectives) on the capital structure and profitability of the private commercial banks of Bangladesh. Based on a panel data of 22 Private commercial banks in Bangladesh for 12-year time period (2005-2016), the Feasible Generalized Least Square (FGLS) regression model finds that capital structure

of the banks is significantly and negatively influenced by the number of board meeting, large institutional shareholding and public shareholding. Among the control variables, this study finds that the banks with higher age of operations and higher growth opportunities tend to take more leverage whereas banks having larger assets and higher profitability are reluctant to take more leverage in their capital structure.

From the profitability predicting models, it has been found that profitability is positively related to the board size and institutional shareholding and is negatively related to the number of audit committee meeting and institutional shareholding. Among the control variables, the results reveal that the banks having higher growth opportunities can earn more profits (both ROA and ROE) whereas larger sized and highly leveraged banks have lower profitability.

This study has great implications for the stakeholders of the banking sector in Bangladesh, especially the board of directors, financial managers and researchers. The financial managers and the board of directors will have a clear idea of how the capital structure of the company is affected and comprehend how even the less focused factors like corporate governance and ownership structure have influence in determining the capital structure. The focus on the corporate governance and ownership structure will help them to realize how non-numeric items of the balance sheet also affect the profitability of the banks. This study can be extended further by taking longer time data period and incorporating other mechanisms of corporate governance from the perspective of employees, depositors, and managers' behavior and also by incorporating other forms of firm performance like market performance and dividend payout ratio. Moreover, these findings will be much more robust if the endogeneity problem can be solved through applying sophisticated econometric methodology.

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