


*Original Research*

# Impact of Board Size and Financial Leverage on Firm Value: Evidence from a Fastest Growing Economy

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## Abstract

This paper plans to examine the effects of board size and financial leverage on the firm value measured as ROE and Tobin's Q of DSE-listed manufacturing companies in Bangladesh ranging a period from 2010 to 2022. This research developed ordinary least square (OLS) and fixed effects model (FEM) to identify the hypothesized relationships. The paper finds that board size does not matter for firm value but the affinity between financial leverage and firm value is positive and statistically significant. Firm size and firm age are found with a perplexing role in enhancing the value of firms because they show negative affinity when the firm value is measured as ROE but the same associations become positive when the firm value is measured as Tobin's Q. This paper adds to the emerging body of literature on board size-performance and leverage-performance relationship in the Bangladeshi context using a reasonably wider and newer data set.

**Keywords:** Corporate governance, firm value, manufacturing company, Bangladesh.

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## Introduction

The mounting speed of globalization and the fast-changing business environment has created an urge to know corporate governance (hereafter called CG) qualities and practices around the globe (Bufarwa et al., 2020). CG is a well-researched and highly debated area now (Jahid et al., 2020). It includes a broad range of statutes and systems followed by executives to accomplish corporate financial goals. Scholars observed from various viewpoints applying various analytical lenses. For example, Sir Adrian Cadbury viewed it from a directional perspective, and he described it as a system by which corporations are governed and regulated (Cadbury, 1992, p.15), while Shleifer and Vishny (1997, p.737) highlighted the link viewpoint and considered it a means of dealing with how corporate fund providers convince them of receiving a fair profit on both own and loan capital. Agency theory is the principal basis of CG (Jackson et al., 2013; Ermongkonchai, 2010), which suggests stocks should be scattered widely and the duties of managers to be separated from that of owners, and managerial works might differ from those needed to optimize the earnings of stockholders (Kapopoulos and Lazaretou, 2007). This is what is known as the principal-agency conflict (Fama and Jensen 1983; Zhang et al. 2016). Jensen and Meckling (1976) found a 'master-servant' frame and insisted on acknowledging the power link, where the master specifies tasks for the servant (Mallin, 2006, p.12). But it is highly doubtful that representatives will ever work for the highest benefits of the master (Jensen and Meckling, 1976). Dalton et al. (1998) opined that the agents work for their interests instead of stockholders' interests as they get control over the company. Agency costs occur due to the abuse of managers' power and to check the abuse (Mallin, 2006, p.13).

Many questionable corporate failures have taken place in Europe and the USA, which have sparked previous debates on ways to hold back the conflicts between stockholders and management and plan good governance practices for sustainable industrial development. An increasing call for a sound CG mechanism has gained momentum due to the above occurrences. Recent studies on CG in emerging markets reveal (Pucheta-Martínez and Gallego-Álvarez, 2020; Ciftci et al., 2019; Uribe-Bohorque et al., 2018; Ararat et al., 2017; Roy, 2017; Ducassy and Guyot, 2017; and Lozano et al., 2016) that firms with more effective CG mechanisms may avail greater access to low-cost finance, control agency conflicts, ensure high operational and financial performance and, in turn, can protect shareholders interest. It is also evident that the CG mechanism is less effective when a country experiences a weak governance system (Rashidet al., 2018). Sound CG mechanisms lead to higher productivity, profitability, and value, and these, in turn, make a firm more attractive to investors. Moreover, relevant information should pass to the stakeholders to ensure good governance and transparency (Hasan et al., 2012).

Bangladesh is an emerging economy located in the South Asia region. CG in Bangladesh is at an early stage, and some forces like legal, political, and socio-economic factors and different actors influence the code (Piesse et al., 2012; Chahine&Safieddine, 2011). The CG practices in Bangladesh are less developed than the developed countries, such as the Anglo-American affiliated countries, Germany, and Japan. Wang and Chen (2016) noted that emerging economies are significantly unique in their institutional, regulatory, and legal environment. However, Bangladesh has experienced many

corporate collapses over two decades, such as Hallmark, Bismillah Group, Oriental Bank, Modern Food Ltd, Adamjee Jute Mills Ltd (the biggest jute mills in the globe), and two major stock market crashes, one in 1996 and another in 2010-11 (Meah and Chaudhory, 2019). The stock market collapse caused colossal losses for small investors that testimony absence of firm-level good governance and the failure of the regulatory bodies (Ferdous, 2018). CG knowledge becomes crucial in emerging economies since it helps develop governance mechanisms that allow firms wide passage to cheap finance, alleviate agency conflicts and dependable achievement, and promote a positive outlook of the corporate stakeholders (Claessens&Yurtoglu, 2013). A few studies (Ferdous, 2018) have shown the status of CG in Bangladesh based on some compulsory administrative requirements (for example, Sobhan, 2016; Sobhani et al., 2009). Hasan et al. (2013) found most of the companies in Bangladesh have concentrated ownership and dominant stockholders, and as such, dominant families or a group of companies manage those firms. In these circumstances, management is nothing but an extension of dominant owners, which results in CEOs, administrative managers, and board chairs must be from the dominant stockholder groups in most Bangladeshi firms. Even in most cases, founding family ownership takes the lead in all areas of governance and management. It is evident (Farooque et al., 2007) that, on average, the top five shareholders own higher than 50 percent of the equity capital of a firm. Many scholars (Khan et al., 2013) mentioned that the ownership designs of 219 publicly traded companies of the Dhaka stock exchange (hereafter called DSE) revealed that the leading three shareholders held about one-third of the total stocks. The ratio becomes large in land and buildings, oil & energy, engineering, textile, and pharmaceuticals & chemical. Another study disclosed that firms in Bangladesh are not interested in enlisting in the stock market for their required funds as they fear losing control over the firm (Haque et al., 2011). The dominant presence of large shareholders, external CG devices, such as institutional investors, financial leverage (hereafter called FL), and regulatory requirements could influence firm performance. Bangladeshi firms fail to ensure standard CG practices analogous to the developed world. It is worth mentioning that CG devices work well in Anglo-American countries since their jurisdiction is highly conditional upon the clarity of the enforcement of laws (Asian Development Bank, 2000). But the CG code is less effective in emerging economies like Bangladesh as the vital organizational powers have limited ability to exert control over firms to ensure compliance (Hasan et al., 2012). As such, this paper plans to investigate the influence of board size (hereafter called BS) and FL on firm value (hereafter called FV) in the context of Bangladesh. This inquiry is revealing because no study is available in the literature in the context of developing countries like Bangladesh and beyond. Besides, this paper adds to the emerging body of literature on CG-performance relationships in the Bangladeshi context using a reasonably wider and newer data set. The remainder of this paper is organized as under: Section 2 presents the literature review hypothesis development. Section 3 talks about the data and the research approach, followed by results in section 4. Section 5 presents the discussion of findings and ending comments and leads to further research in Section 5. The paper ends with a discussion and ending comments and leads to further research in Section 6.

### **Prior Studies and Hypothesis Development**

The purpose of CG devices is to lessen the agency cost emerging due to the divorce of ownership from management (Khan et al., 2020) since agents are sometimes viewed with

opportunistic behavior to exploit personal benefits at the expense of the owners (Hasan et al., 2013). Usually, the influence of CG devices on corporate financial attainment presented diverse and indecisive results around the globe. Asian Financial Crisis in 1997-1998 forced numerous trouble-prone nations to focus on designing more sound CG practices (Detthamrong et al., 2017). Those countries have been trying to lessen their financial vulnerability and enhance CG practices. In such a situation, companies promote a culture of awareness, clarity, and responsibility that leads to long-term value creation and sound financial health. Against the above backdrop, the present study attempts to identify the effects of BS and FLOn firm performance. Prior literature on the affinity between performance and CG traits, precisely, the size of the board, board independence, gender diversity, surveillance structure, and directors' shareholdings exhibits mixed results.

BS has a part in leading and guiding managers (Detthamrong et al., 2017). A comprehensive board is more viable for adequate access to diverse resources than an undersized board. BOD having diverse learning can develop better decision-making ability, which, in turn, produces better firm performance. But, the observed results on the connection between BS and performance are diverse. Yermack (1996) noted a negative relationship between BS and firm performance in a sample of 452 big industrial companies in the USA from 1984 to 1991. Hasan et al. (2013) noted that firm financial performance increases with BS for complex firms. Besides, Mishra and Kapil (2018) conducted a study on 391 Indian companies out of CNX 500 companies listed on the National Stock Exchange covering the period from 2010 to 2014, five years, and noted that there is a positive association between BS and FV. Puni and Anlesinya (2020) tested the relationship between CG mechanisms and firm performance taking a sample from Ghanaian listed companies from 2006 to 2018, where they advanced that BS has positive and significant impacts on corporate financial performance. Bhatt and Bhattacharya (2015) examined the effects of board attributes on corporate financial performance by taking a sample of listed firms in the Indian information technology (IT) sector and noted that BS has a positive and significant effect on corporate financial performance. In addition, Mishra and Mohanty's (2014) noted that the board attributes have a significant impact on the financial success of the 141 Indian listed companies. Huang and Hillary (2018) advanced that board characteristics have a positive influence on the ROA of 1,500 enterprises over a period from the years 1998 to 2010. In their study of 29 Indian banks for the years 2009 to 2016, Shukla et al. (2018) found that the board features had a beneficial impact on the market performance of the sample banks. Varghese and Sasidharan (2020) found a positive tie between BS and FV. Jackling and Johl(2009) uncovered that BS impacted performance in Indian firms. Rashid et al. (2010) tested the relationship between boardroom composition and financial performance with a sample of 90 companies listed on the DSE from 2005 to 2009, five years. They advanced that board autonomy does not influence the financial performance in most of the Bangladeshi listed companies. They also documented that the size of the board is negatively associated with financial performance. Jensen (1993) indicates that firm performance declines when BS increases. This is based on the argument that working effectively with a large group of people to communicate, coordinate tasks, and make decisions is more difficult and expensive than working with smaller groups. The expenditures outweigh the benefits of having more personnel available. Therefore, Jensen (1993) noted that keeping boards small can help them function better. Eisenberg et al. (1998) reported a negative

connection between BS and firm performance in a sample of firms in Finland. Mak and Kusnadi (2005) found a hostile relationship between BS and company performance, estimated by the Q ratio on a sample of Malaysian and Singaporean corporations. Fatma and Chouaibi (2021) noted that BS is inversely linked to the FV. In addition, Sehwawat et.al. (2020) advanced that BS does not matter for FV.

From the perspective of the agency hypothesis, a large board is suitable for monitoring managers as many individuals will examine the administration's activities that help decline agency costs emerging from the breakup between management and shareholders and thus improve firm performance (Rashid, 2018). It is a notion that BS is connected positively with corporate performance. Based on the above backdrop, the current study proposes that:

*H<sub>1</sub>: There is a positive association between BS and firm performance.*

Modigliani and Miller (1958) demonstrated that corporate capital structure is irrelevant when finding a company's value. However, Roberts and Sufi (2009) suggested that debt capital can enhance a firm financial performance by inducing more careful supervision by creditors. Literature on corporate finance reported assorted outcomes about the influence of FL on corporate performance, i.e., it has no positive or insignificant effect on corporate financial performance (Hsu et al., 2021; Prashar and Gupta, 2020; and Chang and Shim, 2019). Antoniou et al. (2008) observed that the affinity between FL and firm performance is negative. Cai et al. (2011) pointed out that a shift in FL affects stock prices negatively. Vithessonthi and Tongurai (2015) affirmed that the FL of Thai companies is negatively associated with corporate financial performance. The proof is compatible because the expenses of economic misery are more than the usefulness of financing. Contrarily, Margaritis, and Psillaki (2010) found a positive influence of FL on corporate financial performance. Also, Berger and Patti (2006) showed that a high FL or a lower debt-equity ratio is related to more satisfactory corporate financial performance. But Connelly et al. (2012) found no association between FL and company financial performance. If the use of debt in the capital structure can influence creditors to monitor the activities of firms, then higher FL would be more likely to use in projects with sound fundamentals by rigorous investment screening, and they do better than the companies with lower FL (Detthamrong et al., 2017). Hence this study proposes the following hypothesis.

*H<sub>2</sub>: There is a positive association between FL and firm performance.*

## **Research Method**

This paper collects data from respective annual reports from the sample companies for thirteen years from 2010 to 2022. Initially, this paper found 202 manufacturing companies (hereafter called MC) listed on DSE, but the annual reports are available for 82 companies after meeting the three important criteria, such as firstly, the company must be listed before December 31, 2010, and remain listed till December 31, 2022, the secondly, annual reports must be available at the company website and thirdly, this study skips some firm-year observations with the negative book value of equity (Elkamhi et al., 2012). The efficacy of CG mechanisms may be weak where the regulatory interventions are more

stringent, particularly in the financial sector and public utilities. And as such, this research has planned to study enterprises in the manufacturing sectors as the regulatory interventions in these sectors are lenient (Booth et.al., 2000), which facilitates quick appraisal of the effects of CG mechanisms on corporate financial performance. The study has three variables of interest. The independent variables include BS and FL. The dependent variable is firm financial performance measured as return on equity (hereafter called ROE) and Tobin's Q (hereafter called QR). The company's age and size are the control variables. Table 1 presents a summary of the operationalization of variables.

Table 1. Summary of Research Variables

Variables	Indicators	Measure
Independent variables	BS	The total number of directors on the corporate board includes executive directors, non-executive directors, and the chairperson.
	Leverage (LEV)	Total liabilities to total assets
Control Variables	Firm age (hereafter called FA)	The total number of years since the listing on DSE
	Firm size (hereafter called FS)	Natural logarithm of total asset
<p><b>Dependent Variable</b>                      Several studies measured firm financial performance using accounting-based proxy variables, such as return on equity (ROE) and return on assets (ROA), and market-based measures (QR) to capture the effectiveness of CG mechanisms (Rashid et al., 2010). Accounting-based performance measures are constrained by some problems as accounting profit can be manipulated if managers prefer a particular accounting method to improve performance (Rashid, 2013). The behavior of managers is opportunistic for taking advantage of information asymmetry to manipulate accounting numbers (Healy, 1985). Thus, this study plans to use ROE and QR to measure corporate financial performance (Hsu, 2021).</p>		
ROE	The ratio of operating income (EBIT) to total Shareholders' equity	This ratio shows how profitable a company is relative to its total shareholders' equity $ROE = \frac{\text{Operating income}}{\text{Total equity}}$
QR	Tobin's Q	The ratio of market value (MV) to book Value (BV) of assets. The MV of the assets is determined as the MV of the equity plus the BV of the assets minus the BV of the equity. Several researchers in the field of CG and corporate finance used this technique to determine the firm's financial performance. (Maniruzzaman and Hossain, 2019a).

The current research has developed subsequent panel regression models to analyze the effects of BS on corporate performance and FL:

$$\text{Model-1: } ROE_{it} = \alpha + \beta_1 \times BS_{it} + \beta_j \text{Control}_{it} + \varepsilon_{it}$$

$$\text{Model-2: } QR_{it} = \alpha + \beta_1 \times BS_{it} + \beta_j \text{Control}_{it} + \varepsilon_{it}$$

Where:

- $\alpha$  Intercept.
- ROE* Return on equity.
- QR* QR is used as a proxy for a market measure of performance
- LEV* FL measures the ratio of total liabilities and total assets.
- BS* Board size.
- Others* Control variables: FA and FS.
- $\varepsilon$  Error term.

## Findings

The correlation matrix (see Table 3) for the dependent and independent variables reveals no multicollinearity problem as the correlations are low between the variables. Gujarati (1995) mentions that if the correlation between the variables remains under .80, it indicates that there is no multicollinearity problem. Besides, the current study presents descriptive statistics (see Table 2) on the variables used. Descriptive Statistics demonstrates mean, median, SD, maximum, and minimum to know the nature of data before running the OLS regression.

Table 2. shows a summary of statistics of key variables

Variables	Minimum	Maximum	Mean	Median	Std. Deviation
ROE	-1.430	.970	.108	.080	.179
QR	.510	1.520	1.069	1.060	.117
BS	4.000	14.000	7.252	7.000	1.676
ID	.000	4.000	1.210	1.000	.744
LEV	.004	4.476	.602	.543	.407
FS	2.901	10.797	6.966	6.961	1.490
FA	5.000	46.000	24.710	25.000	8.034
N=1066					

The Breusch-Pagan Godfrey test was used to test the heteroscedasticity in the distribution. The Breusch-Pagan Godfrey test indicates that the null hypothesis (p-value=0.1295) is accepted, which further signals that there is a heteroscedasticity in the distribution. When a predictor variable in a multiple regression model can be linearly

predicted from the others with a high degree of accuracy, multicollinearity issues must be examined using variance inflation factors (VIF). There is a maximum VIF threshold value of 10 for the multicollinearity assumption (Gatwirth et al., 2009).

Table 3. presents the correlation matrix of the key variables

Variables	ROE	QR	BS	ID	LEV	FS	FA
ROE	1						
QR	.226	1					
BS	0.027	0.016	1				
ID	0.052	0.171	0.226	1			
LEV	0.004	0.075	-0.023	-0.112	1		
FS	0.106	-0.270	0.289	0.279	-0.216	1	
FA	0.236	0.234	0.184	0.388	-0.023	0.152	1
N=1066							

This paper initially planned to develop an ordinary least square (hereafter called OLS) to catch the effects of BS and FL on FV measured as ROE. But the Breusch-Pagan Godfrey test reveals that the data set contains some endogeneity problems. In this case, the OLS regression model is not suitable for regression analysis. To remove the endogeneity effects from the data set, this research planned to use either fixed effects model (hereafter called FEM) or random effects model (REM) based on the predictions from Hausman Test statistics. The chi-sq. statistics (12.456268) and p-values (0.0143) of Hausman test indicate that FEM is more suitable for the study. So, this paper adopted FEM (see table 4) for regression analysis. FEM has power to eliminate the endogeneity effects pertaining to the data set because it removes both cross-section effects and period effects from the panel data. However, OLS regression model is presented for reader understanding (see table 4).

Table 4. Regression results for ROE

Variables	FEM		OLS		Collinearity Statistics	
	Coefficient	Prob.	Coefficient	Prob.	Tolerance	VIF
BS	0.006206	0.2063	-0.04325	0.1984	.771	1.296
LEV	0.066961	0.0000	0.012355	0.3581	.864	1.157
FS	-0.003531	0.7724	0.010716	0.0055	.710	1.409
FA	-0.013668	0.6494	0.005158	0.0000	.640	1.563
Hausman Test:	Chi-sq. Statistic=12.456268 Prob.=0.0143					
F. Statistic	8.168877		17.87558			
Prob.	0.0000		0.0000			
R <sup>2</sup>	0.450119		0.123137			
Adj. R <sup>2</sup>	0.395017		0.119605			
Durbin-Watson Stat.	1.552		0.961			



From table 4, it is observed that BS is positively linked to ROE but the relationship is not statistically significant. The connection between FL and FV (see table 4) is positively associated and the relationship is significant at a 1% level of significance. The positive tie between FL and FV reveals that the use of debt capital in the capital structure of most of the MCs in Bangladesh tends to enhance value. The control variables, such as FS and FA are negatively associated with ROE, though the relationships are not statistically significant.

Furthermore, this research also plans to test the effects of BS and FL on FV based on the market measure (QR). As the data set contains endogeneity effects, this research again plans to use either REM or FEM for regression analysis. To select a suitable model for regression analysis, this paper conducted Hausman Test. The chi-sq. Statistics of the Hausman test (56.423406) and p-value (0.0000) reveal that FEM is more suitable for the study. Therefore, this paper analyzed the hypothesized relationship based on FEM (see table 5). However, the result of OLS is presented for readers understanding.

Table 5. Regression models for QR

Variables	FEM		OLS		Collinearity Statistics	
	Coefficient	Prob.	Coefficient	Prob.	Tolerance	VIF
BS	-0.003747	0.1824	0.004229	0.0430	.771	1.296
LEV	0.005486	0.6937	0.003369	0.6866	.864	1.157
FS	0.064411	0.0000	-0.025720	0.0000	.710	1.409
FA	0.042124	0.0145	0.003987	0.0000	.640	1.563
Hausman Test:	Chi-sq. Statistic=56.423406 Prob.=0.0000					
F. Statistic	13.70666		48.37407			
Prob.	0.0000		0.0000			
R <sup>2</sup>	0.578681		0.154242			
Adj. R <sup>2</sup>	0.536462		0.151054			
Durbin-Watson Stat.	1.651		0.875			

From table 5, it is observed that BS is inversely linked to QR though the relationship is not statistically significant. It signals that the BS of Bangladeshi MC in most cases does not matter for performance. The connection between FL and FV (see table 5) is positively associated and the relationship is not significant. The positive tie between FL and FV reveals that the use of debt capital in the capital structure of most of the MC in Bangladesh tends to enhance FV. The firm-level control variables, such as FS and FA are positively associated with QR and relationships are statistically significant (see table.5). These directions of relationship reveal that larger and more experienced firms are more efficient to add corporate value in the context of Bangladesh.

## Discussions

This study examines the hypothesized associations between the variables using FEM. The analysis uses data extracted from the annual reports of DSE-listed firms in Bangladesh from 2010 to 2022, thirteen years. This study is based on the premise of the agency theory and uses two established performance measures of the corporate finance literature that are QR (market-based performance measure) and ROE (accounting-based performance measure) to measure FV. Besides, this paper attempts to investigate the effects of firm-level control variables, such as FS and FA on the corporate financial performance. Two FEMs, one for QR and the other for ROE (see Tables 4 and 5), have been developed to catch the effects of BS and FL on FV. Hypotheses designed for the study are not in line with the actual results. Some are accepted, while others are rejected at different levels of significance. This study tries to answer the questions referring to the logical grounds of why and why not hypotheses are accepted. The study has developed, in total, two hypotheses and tested them by producing multiple regression models.

The first hypothesis assumes a positive relationship between the BS and FV based on Market Measures and Accounting measures. The results of both the regression models (see table 4 and 5) advanced that BS is positively associated with ROE, while negatively associated with QR. However, none are statistically significant. These findings signal that BS does not matter for FV in the context of MC in Bangladesh. More specifically, larger boards are not capable enough to add value. These findings contradict the prediction of agency theory. In Bangladesh, there is no CG except for family governance. Controlling families can do whatever they want. The appointment of directors heavily relies on the will of founding family members. In most cases, family members get priority to be appointed in the key position of the company, such as CEO, directors, and other key personnel of the company ignoring their level of skills and expertise. Besides, corporate owners maintain a close link to the power party of the government of Bangladesh. Therefore, family owners tend to exploit the right of let alone shareholders and other levels of stakeholders in connection with the management. This paper realizes that the above-noted issues create the BS inefficient to excel the value of the company. Therefore, the positive association between BS and FV measured as ROE is supported by some past studies in the corporate finance and CG literature (Jackling and Johl, 2009; Rashid, 2015; Detthamrong et al., 2017; Mishra and Kapil, 2018; Varghese and Sasidharan, 2020). They advanced that BS has a vital role in improving the ability of directors to supervise and control the activities of managers. A large board is more likely to provide better access to various resources than a small board. Agency theory predicts that a corporate board with diverse experience and knowledge would probably have more effective learning and sensible decision-making ability, resulting in better FV. Thus, the more the number of directors, the more will be the surveillance ability of the boards. Rashid (2015) argued that a large board could watch the actions of managers more, which could reduce agency costs arising due to the separation of management from ownership that, in turn, improve firm performance. This outcome is not supported by some studies (Fatma and Chouaibi, 2021; Guest, 2009; Cheng et al., 2008; and Hanifa&Hudaib, 2006). The inverse link between BS and FV measured as QR is in line with some past literature (Sehrawatetal et.al., 2020; Guest, 2009; Cheng et al., 2008; and Hanifa&Hudaib, 2006), while this result is contrasted by some past evidence (Jackling and Johl, 2009; Rashid, 2015; Detthamrong et al., 2017).

Moreover, while measuring the impact of FL on FV measured as ROE and QR (see Tables 4 and 5), the paper revealed a positive association but the tie with ROE is statistically significant, which signals that FL affects FV positively in Bangladesh. More specifically, it can be argued that the extent of borrowed capital is liked with the value addition of most of the MC in Bangladesh. Firms in Bangladesh are aware enough of the cost of debt, tax benefits, and its associated risk. Thus, the efficient use of debt by the Bangladeshi MC helps in maximizing the FV. This research also supports agency theory as the relative cost of debt and equity is considered in planning the capital structure (Myers and Majulf, 1984). Some companies in Bangladesh do not want to collect funds through issuing shares as they fear losing control over the affairs of the company. This may be one of the causes of to use of more debt in the capital structure of a company in the context of Bangladesh. Fosu (2013) advanced that there is a positive association between FL and FV. The 1 percent increase in debt to total capital can result in up to a 10% overall increase in the profitability for US firms except for the extreme scenarios, where high leverage may result in firms' bankruptcy (Berger & Di Patti, 2006). The study of Margaritis&Psillaki (2010) also supported the relevance of the agency theory. Some earlier studies noticed that the relationship FL value is negative (Chechet&Olayiwola, 2014).

Furthermore, while testing the effect of FS and FA on FV measured as ROE (see Table 4), the FEM shows negative affinity but the ties are not statistically significant. These outcomes indicate that bigger and more experienced firms cannot contribute to the value addition of MC in Bangladesh. This finding supports some past studies (for example- Maniruzzaman & Hossain, 2019b Haniffa&Hudaib, 2006) as they found a negative association between FS and corporate financial performance. Besides, this finding does not support some past studies, such as Carter et al. (2003) and Yermeck (1996). On the other hand, when this paper attempts to assess the effects of FS and FA on FV measured as QR, it is observed that the relationship is positive and statistically significant at 1% and 5% levels of confidence (see Table 5). This affinity advanced that the larger and older firms are more capable to enhance value in the context of MC of Bangladesh. It is a general premise that older firms have better financial performance because of their experiences and the benefit of learning by doing (Tshipa et al., 2018). Also, younger companies are prone to "liabilities of newness" that refer to several poorly understood factors leading to higher failure rates (Sobhan, 2016). Aging can also harm financial performance because of the inertia effects that could lead a firm to become inflexible and unresponsive to the rapidly changing business environment in which they operate (Solakoglu and Demir, 2016). This is more revealing because the extent and direction of the relationship change as the changes of measurement criteria (such as ROE and QR) of the regressed variable (see Table 4 and 5).

## Conclusions

The 1997-1998 Asian Financial Crisis and many questionable corporate failures in Europe and the USA caused most crisis-hit countries to focus on creating and developing better CG practices (Detthamrong et al., 2017). They tried to reduce their vulnerability to economic shocks and improve their CG practices. Thus, companies must create a culture of consciousness, transparency, and accountability, which will create long-term value and sound financial health for them. And as such, the term CG has witnessed a concern for

corporate stakeholders in the contemporary global market setting. CG forms a broad spectrum of statutes and systems that corporations follow to achieve success and accomplish corporate financial goals. Against the above backdrop, the study has developed some hypotheses on the effects of BS and FL (as proxy variables of CG) on corporate financial performance based on accounting and market measures. A review of the literature on the relationship between corporate performance and some CG variables like BS and FL has shown mixed results. The outcomes of the study reveal that BS does not matter for corporate value in the context of MC in Bangladesh. But the presence of debt capital in the capital structure of Bangladeshi MC seems value-additive, particularly when the FV is based on market measures. FS and FA are found with a perplexing role in enhancing the value of the firm because they show negative affinity when the FV is measured as ROE but the same relationship becomes positive when it is measured as QR.

This paper acknowledges some limitations which may be the research fed of further research. This study considers only MC but the future study may consider total non-financial companies listed on DSE. This study adopts OLS and FEM for data analysis but the use of the 2 LS regression model or 3 LS regression model may provide more accurate results. Besides, the future study may include some variables like the ownership level of the founding family, directors having political connections, and ethnic diversity in the board.

### Abbreviations

BS	Board size
CG	Corporate governance
DSE	Dhaka Stock Exchange
FA	Firm age
FEM	Fixed effects model
FL	Financial Leverage
FS	Firm size
FV	Firm value
MC	Manufacturing Companies
OLS	Ordinary least square
REM	Random effects model
ROE	Return on equity
QR	Tobin's Q

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