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Shareholding Patterns and Financial Performance: Evidence from the Banking Sector in Bangladesh

Mohammad Kamal Hossain
Department of Accounting and Information Systems
Jashore University of Science and Technology

ABSTRACT

This study attempts to examine the relationship between shareholding patterns and banks' financial performance, as defined from three different dimensions, namely, profit-based performance measured by return on equity (ROE), market-based performance measured by Tobin's Q (TQ) and value-based performance measured by economic value added (EVA). It included 29 out of the 30 banks listed on the Dhaka Stock Exchange for the period 2013–2017, providing a balanced panel with 145 observations. All data were collected from the annual reports of the respective banks. The random-effects GLS regression model was employed to test the chosen hypotheses. This study found a conflicting result, i.e. there was a relationship between some, but not all of the patterns of shareholdings and financial performance of the listed banks in Bangladesh. For example, a significant relationship between foreign shareholding and banks' financial performance, as measured by ROE, TQ and EVA-log, was found. Sponsor-directors and general public shareholdings were found to be significantly related to ROE and EVA-log, but insignificantly associated with TQ. However, institutional and government shareholdings were insignificantly related to the banks' financial performance, regardless of the measures employed to assess it. This study contributes to the existing literature by exploring the relationship between shareholding patterns and banks' financial performance, and may indicate the need for a restructuring of the existing shareholding patterns in the banking sector in Bangladesh in order to maximise performance. This study is distinctive compared to prior studies, as it examines the relationship between the shareholding patterns disclosed in the annual reports of the sampled banks and banks' performance, as measured by EVA-log along with ROE and TQ, which have not been covered earlier.

Keywords: *Shareholding patterns, Financial performance, Economic value added, Banking sector in Bangladesh*

INTRODUCTION

Corporate shareholding structure has been believed to play a pivotal role in the corporate finance literature (La Porta, Lopez-De-Silanes & Shleifer, 1999). It has a significant correlation with the Agency Theory (Khamis, Elali & Hamdan, 2015), which argues that an agency problem exists between concentrated ownership and dispersed ownership, between managerial ownership and non-managerial ownership, or between majority and minority shareholders, and that this negatively affects company performance. Berle and Means (1932) were the pioneers who elucidated the conflict or agency problem between different shareholding patterns. Shareholders with a high volume of equity shares typically have controlling power over corporate management, and they might exploit this power for personal benefit, ignoring the interests of the minority shareholders (Bebchuk, 1999). Costly measures are adopted (e.g. appointing independent non-executive directors to the board) to prevent this problem and to ensure the legitimate rights of minority shareholders, and this leads to an increase in monitoring costs for firms. However, "large shareholders are argued to monitor the management better than small shareholders as they internalize the larger part of the monitoring costs……." (Laiho, 2011, p. 1), which results in lower monitoring costs. Therefore, there is a role of shareholding structure in influencing corporate performance (Jensen & Meckling, 1976).

Over recent decades, many researchers (e.g. Wruck, 1988; Mehran, 1995; Gorton & Schmid, 1996; Firth, Fung & Rui, 2002; Welch, 2003; Hiraki, Hideaki, Ito, Kuroki & Masuda, 2003; Al-Sa'eed, 2018; Tam & Tan, 2007; Bargezar & Babu, 2008; Méndez & Gomez-Anson, 2005; Khan, Balachandran & Mather, 2007; Yarram, Balachandran & Sivalingam, 2007; Fazlzadeh, Hendi & Mahboubi, 2011; Mollah, Farooque & Karim, 2012; Aman & Hamdan, 2018; Mohammed, 2018; Chancharat & Chancharat, 2019; El-Habashy, 2019; Ironkwe & Emefe, 2019; and Kao, Hodgkinson & Jaafar, 2019, amongst others) across developed and developing markets have contributed to the literature of the corporate finance through rigorous studies on the relationship between corporate ownership structure and firm performance. However, the ownership structure and its influence on the banking sector in Bangladesh may be different from other developed and developing countries. This is because the corporate sector in Bangladesh consists mostly of small and medium-sized firms, of which 85% or

more are established and controlled by single-family members or their heirs (Farooque, Zijl, Dunstan & Karim, 2007). The corporate owners of Bangladeshi firms exercise significant power over corporate management. This scenario is different from that in developed and developing countries where a diffused ownership structure is common. Furthermore, there are enormous variations between Bangladesh and other emerging, less-developed or developed countries in terms of their social and economic systems and corporate management cultures (Manawaduge, 2012). Thus, studies into ownership structures and financial performance may not produce similar results for developed and less-developed countries, like Bangladesh.

In this context, a small number of studies (e.g. Farooque et al., 2007; Farooque, Zijl, Dunstan & Karim, 2010; Muttakin & Ullah, 2012; Muttakin, Khan & Subramaniam, 2014; and Khan & Siddiqua, 2015, amongst others) have been conducted into the relationship between ownership structure and performance for Bangladeshi firms. These previous studies shared two common characteristics. Firstly, ownership structure was seen to be characterised by board ownership, managerial ownership, institutional ownership, concentrated or dispersed ownership and ownership held by block shareholders. For example, Farooque et al. (2010) revealed a significant positive relationship between ownership concentration and firms' performance. Subsequently, Muttakin et al. (2014) found a positive relationship between family ownership and firms' performance and also revealed that family firms performed better than their non-family counterparts did. In contrast, Muttakin and Ullah (2012) provided evidence of highly concentrated ownership having a negative effect on company performance. Similarly, Khan and Siddiqua (2015) documented family control having a negative impact on the value of financial firms, although family control was found to add value for newly established financial firms. In contrast, Farooque et al. (2007) had previously identified an insignificant relationship between concentrated ownership and Bangladeshi firm performance. However, the listed banks in Bangladesh have disclosed their shareholding patterns in their annual reports as sponsor-directors, institutional, general public, government and foreign ownership (e.g. Dhaka Bank, 2018; City Bank, 2018; and National Bank, 2018, amongst others). Hitherto, no attention has been paid to whether the current shareholding patterns disclosed in the annual reports of listed banks in Bangladesh affects the banks' financial performance.

Secondly, prior studies in Bangladesh have also commonly proxied firm performance by means of return on assets (ROA), return on equity (ROE), Tobin's Q (TQ) and market share price (SP). The existing accounting literature reveals that a high percentage of ROE and ROA indicates better financial performance of firms. However, these are backward-looking and profit-based performance measures that focus on short-termism (Farooque et al., 2007; Hossain, Salam & Sen, 2017). In addition, the calculation of ROA and ROE can be manipulated within accounting principles and standards (Mollah et al., 2012). Equally, TQ and SP represent firm performance based on market perception (Ntim, 2009). The existing corporate finance literature suggests that a high ratio of TQ and high SP for firms indicate better performance. However, TQ can yield misleading indication of a firm's performance, particularly when a firm makes under-investments (Dybvig & Warachka, 2015). Likewise, SP may give an incorrect indication of firm performance, particularly if the stock market of a country is not efficient.

Market efficiency is absent in the Dhaka Stock Market, as several reports document that its security prices do not fluctuate based on all the available relevant information, that individual dominance can be observed and that investors are not rational; consequently, the market share prices do not truly reflect firms' performance. In sum, profit-based and market-based indicators do not accurately reflect a firm's true financial performance or they fail to provide an indication of the true extent of the value created by a firm in an accounting year. Economic value added (EVA), an alternative performance indicator, is a value-based measure that assesses the true performance of firms and indicates the value generated by firms for their shareholders in a particular accounting period (Baker, Deo & Mukherjee, 2009). However, it is still unknown whether the current shareholding patterns disclosed in the annual reports of the sampled banks in Bangladesh affect performance, as measured by EVA.

Therefore, this study aims to examine the relationship between the different shareholding patterns disclosed in the annual reports of listed banks in Bangladesh and their financial performance, as measured by ROE, TQ and EVA. This study differs from previous work on ownership structure and performance in two ways. Firstly, it focuses on the actual shareholding patterns disclosed in the annual reports of listed banks in Bangladesh. Secondly, in order to allow comparison, it employs three

different proxies for performance, analysing the banks' performance from three different perspectives and investigating the effect of the shareholding patterns on them. This study explores this relationship with the aim of adding diversity to the growing body of relevant work, primarily because the banking sector in Bangladesh is dominated, directed and controlled by founder family members (i.e. sponsor-directors). The findings may also indicate the desirability of restructuring the existing shareholding patterns in the banking sector in Bangladesh, in order to maximise performance.

The remainder of this paper is structured as follows. Section 2 reviews the existing literature on shareholding patterns and firm performance, while Section 3 is concerned with the methodology employed in this study. Empirical results and discussion are presented in Section 4, and finally, Section 5 draws conclusions.

LITERATURE REVIEW

This study reviews the relationship between shareholding patterns and financial performance, considering the proportion of different patterns of shareholding in isolation, rather than combined. As has been mentioned earlier, the annual reports of the listed banks in Bangladesh tend to disclose five patterns of shareholding, specifically sponsor-directors, institutional, government, general public and foreign shareholding; it is, therefore, presumed that different patterns of shareholding explain financial performance in different directions. This is because some patterns of shareholding play an entirely passive role, whereas others play an active role in monitoring and directing the activities of banks. Moreover, the motivations and abilities of various patterns of shareholding may influence in different ways the key decisions taken by firms; thus, firm performance may not all be affected in the same way (Hu, 2008). This is the reason why the study has reviewed the relationship between firm performance and the proportion of different patterns of shareholding in isolation, rather than combined.

Sponsor-Directors' Shareholding and Banks' Financial Performance

In the context of the business environment in Bangladesh, sponsor-directors generally hold an extremely high number of equity shares, as they play a pioneering role in establishing a company. They act as non-executive directors, but also control and influence the board, which may affect firm performance. According to the incentive alignment hypothesis, a high proportion of sponsor-directors' shareholding may increase firm performance, as they can contribute positively to the board in making decisions by using inside information (Mollah et al., 2012). Conversely, the entrenchment hypothesis suggests that this type of shareholder diminishes firm performance, because they focus on maximising their remuneration; consequently, an agency problem is created between them and other types of shareholders (Jensen & Meckling, 1976).

Empirical studies suggest contradictory results in terms of the relationship between sponsor-directors' shareholding and firm performance. For example, using 153 randomly selected manufacturing firms in 1979–1980, Mehran (1995) found that sponsors-directors' shareholding is positively related to firms' TQ and ROA. This result was borne out by Chu (2011) and Arouri, Hossain and Muttakin (2014), who found the same results for a sample of 58 banks in the GCC countries in 2010 and 786 public family firms in Taiwan during 2002–2007, respectively. In contrast, Imam and Malik (2007), Farooque et al. (2010) and Muttakin and Ullah (2012) found a negative relationship between sponsor-directors' shareholding and the performance of Bangladeshi listed firms. However, using a sample of firms listed on the Botswana Stock Exchange for the period 2000–2007, Mollah et al. (2012) identified an insignificant relationship between sponsor-directors' shareholding and performance, as measured by ROA, ROE and TQ. Similarly, Tsetsekos and DeFusco (1990) and El Mehdi (2007) found sponsor-directors' shareholding to have an insignificant effect on performance. Therefore, the following hypothesis is to be tested:

H_1: There is no relationship between sponsor-directors' shareholding and banks' financial performance, as measured by ROE, TQ and EVA.

Institutional Shareholding and Banks' Financial Performance

Institutional shareholders are considered to be passive investors, as they exercise their influence on a firm's management solely in terms of buying and selling shares, suggesting that their effect on company performance is likely to be insignificant. However, they can be effective in encouraging firm management to pursue risky and innovative projects, as they do not need to fear severe penalties or losing their jobs if the projects fail (Aghion, Reenen & Zingales, 2009). Furthermore, large institutional shareholders can force corporate management to ensure good corporate governance and legal safeguards, which may lead to better performance (El-Habashy, 2018). Elyasiani and Jia (2010) found empirical evidence that long-term institutional ownership caused better firm performance by decreasing information asymmetry and advancing the incentive-based component of executive compensation. Similarly, Arouri et al. (2014) revealed a positive effect on TQ and MTB in 58-listed banks of GCC countries; Khamis et al. (2015) found a positive relationship between institutional shareholding and ROA and TQ in listed firms in Bahrain; Amin and Hamdan (2018) identified a positive effect on ROA in 171 Saudi Arabian listed firms; Kao et al. (2019) found a positive relationship with ROA, ROE, TQ and MBVE in 10,151 Taiwanese listed firms; and El-Habashy (2019) recorded a positive effect on ROA, ROE and TQ among listed firms in Egypt.

In contrast, Al-Najjar (2015) provided evidence of a negative relationship between institutional ownership and performance in listed tourism firms in Jordan. Mohammed (2018) found mixed results in firms listed on the Jordanian Stock Exchange, for example, a negative relationship with ROE and TQ and an insignificant relationship with ROA. However, Ahmed (2010) and Mollah et al. (2012) established institutional ownership to have an insignificant effect on ROA, ROE and TQ in the firms listed on the Dhaka and Botswana Stock Exchanges, respectively. Therefore, the following hypothesis is to be tested:

H_2: There is no relationship between institutional shareholding and banks' financial performance, as measured by ROE, TQ and EVA.

General Public Shareholding and Banks' Financial Performance

The contribution of general public ownership to the direct monitoring and controlling of corporate management is, in practice, almost absent. This is because they are known as minority shareholders and their stakes are diffused. Consequently, large or controlling shareholders are encouraged to expropriate firms' wealth for their benefit, at the expense of minority shareholders. This situation leads to an agency problem, which negatively affects company performance. However, and according to Fama and Jensen (1983), public shareholding encourages firms, particularly complex organisations, to place emphasis on professional and skilled employees. This environment is predicted to enhance a firm's profitability (Akhigbe, McNulty & Stevenson, 2017). Empirical studies by Leech and Leahy (1991) and Hoque, Islam and Ahmed (2013) provided evidence of a positive relationship between public ownership and ROE. In contrast, Dwivedi and Jain (2005) argued for the existence of an agency problem between controlling and minority shareholders, finding a negative relationship between public shareholding and firm performance. However, Ahmed (2010) and Mollah et al. (2012) identified public shareholding to have an insignificant effect on performance, as measured by ROE and TQ, in the banks and firms listed on the Dhaka and Botswana Stock Exchanges, respectively. Thus, the following hypothesis is to be tested:

H_3:   There is no relationship between general public shareholding and banks' financial performance, as measured by ROE, TQ and EVA.

Government Shareholding and Banks' Financial Performance

In recent times, a debate about the efficacy of state ownership versus private ownership of firms has opened a new avenue for researchers. Recent corporate failures, particularly in the banking sector, have pushed states to rethink the need for the government ownership of firms and banks. It is argued that a government stake in a firm enhances monitoring by inviting significant media attention on firms. By contrast, government ownership in a firm may lead to suboptimal governance mechanisms, such as the government supporting an excess of workers (Boyko, Shleifer & Vishny, 1995; Megginson, 2005). Conflicts between the government and other

shareholders may also lead to corporate inefficiency (Xu & Wang, 1999), so that performance may be affected negatively.

Borisova, Salas and Zagorchev (2009) found empirically that overall government ownership ensured the quality of governance; however, federal government ownership was found to have a weaker negative relationship, while ownership by royal families and pension funds exhibited a weaker positive relationship with the quality of corporate governance. Similarly, Rafiei and Far (2014) revealed that state ownership positively affects stock returns and dividend payouts in non-financial firms listed on the Tehran Stock Exchange. In contrast, Tusiime, Nkundabanyanga and Nkote (2011) suggested reducing government ownership in public sector entities in Uganda in order to ensure better performance. Similarly, other studies (e.g. Boardman & Vining, 1989; Xu & Wang, 1999) have identified a negative relationship between government ownership and firm performance. However, Arouri et al. (2014) provide evidence of an insignificant relationship between government shareholding and TQ and MTB in a dataset of 58 listed banks in GCC countries. Mollah et al. (2012) also documented an insignificant relationship between government shareholding and the ROA, ROE and TQ of firms listed on the Botswana Stock Exchange. Therefore, the following hypothesis is to be tested:

H_4: There is no relationship between government shareholding and banks' financial performance, as measured by ROE, TQ and EVA.

Foreign Shareholding and Banks' Financial Performance

Foreign ownership of firms is becoming popular increasingly, as it has been thought to have a positive impact on firm performance. "This view derives from the presumption that foreign investment is a conduit for technology, capital, managerial skills, training techniques and various intangibles that promote efficiency" (Ananchotikul, 2006). That is, foreign corporate practices are assumed to be superior to those prevailing in the host economy, and foreign ownership may also be assumed to provide information about superior practices in such areas as information disclosure, internal checks and balances and accounting standards and encourage their adoption (Organisation for Economic Cooperation and Development [OECD], 2002); as a result, firm performance may improve. Sarkar and

Sarkar (2000) provided evidence of the positive effect of foreign ownership on firms' value. Similarly, Dwivedi and Jain (2002) and Bentivogli and Mirenda (2017) documented that a higher proportion of foreign shareholding was related to the increased market value of Indian firms. Arouri et al. (2014) also identified foreign ownership to have a positive effect on the TQ and MTB of 58 listed banks in GCC countries, also in Kao et al. (2019) the same effect was found on the ROA, ROE, TQ and MBVE of Taiwanese listed firms.

However, foreign ownership does not, in fact, always act as a positive influence on corporate governance. Particularly, if foreign owners acquire a controlling stake in a home firm, they may then have the same incentive as other large insiders to expropriate wealth for their benefit, at the cost of minority shareholders; thus, a negative effect on firm performance is forecasted. In line with this premise, Mollah et al. (2012) established a negative relationship between foreign ownership and the market value of firms listed on the Botswana Stock Market. Recently, Khamis et al. (2015) also found foreign ownership to have a negative effect on the ROA and TQ of Bahraini listed firms, and Amin and Hamdan (2018) found a negative impact on the ROA of Saudi Arabian listed firms. However, Kumar (2002) provided evidence of an insignificant effect from foreign shareholding on Indian firm performance. Thus, the following hypothesis is to be tested:

H_5: There is no relationship between foreign shareholding and banks' financial performance, as measured by ROE, TQ and EVA.

DATA AND METHODOLOGY

Sample and Data Sources

The sample consisted of 29 out of the 30 banks listed on the Dhaka Stock Exchange for the period 2013–2017. One bank, which had negative equity throughout the study period, was excluded from the sample. The combination of 29 banks and a five-year study period provided a balanced panel with 145 observations. This study employed panel data, as it provides advantages in estimations, such as "greater variability, less collinearity, higher speed of adjustment, larger sample size, considers the heterogeneity

SHAREHOLDING PATTERNS AND FINANCIAL PERFORMANCE

of cross-sections, a higher degree of freedom, and better efficiency" (Din, Abu-bakar & Regupathi, 2017, p. 5). All data were collected from the annual reports of the respective banks.

Variables

Banks' financial performance is the dependent variable, which is defined from three different dimensions, namely, profit-based performance measured by return on equity (ROE), market-based performance measured by Tobin's Q (TQ) and value-based performance measured by economic value added (EVA). Shareholding patterns are the independent variables, which include five patterns of shareholdings, viz. sponsor-directors, institutional, general public, government and foreign shareholdings, all of which act as a separate explanatory variable.

Table 1: Variables, their Proxies and Measurements

Variables	Proxies	Measurements
Dependent variable: Banks' financial performance	Return on equity (ROE)	Net income (after preferred stock, but before common stock dividends) of a bank divided by its total equity at the end of its financial year.
	Tobin's Q (TQ)	The ratio of the market value of common shares plus total debts of a bank divided by its book value of total assets at the end of its financial year.
	Economic value added (EVA-log)	Log of the average cost of shareholders' equity minus profit after tax, plus provision for general investments of a bank at the end of its financial year.
Independent variables: Shareholding patterns	Sponsor-directors' shareholding (DSSH)	Proportion of equity shares of a bank held by its sponsor-directors at the end of its financial year.
	Institutional shareholding (INSSH)	Proportion of equity shares of a bank held by its institutional shareholders at the end of its financial year.
	General public shareholding (GPSH)	Proportion of equity shares of a bank held by its general public shareholders at the end of its financial year.
	Government shareholding (GVSH)	Proportion of equity shares of a bank held by the government of Bangladesh at the end of its financial year.
	Foreign shareholding (FGSH)	Proportion of equity shares of a bank held by its foreign shareholders at the end of its financial year.

Control variables:	Firm size (FMS-log)	Log of total assets of a bank at the end of its financial year.
	Debt-equity ratio (DER-log)	Log of total debts to total equities of a bank at the end of its financial year.
	Asset tangibility (ASTAN)	Total fixed assets to total assets of a bank at the end of its financial year.
	Firm age (FMY)	Number of years listed on the Dhaka Stock Exchange.
	Risk (RISK)	Proportion of non-performing loans against gross loans and advances of a bank at the end of its financial year.
	Revenue growth (REVG-log)	Log of the percentage of the difference between the current year's total revenue and the previous year's total revenue divided by the previous year's total revenue of a bank at the end of its financial year.
	Firm type (FTYPE)	A binary number that takes the value of 1 if the bank is a traditional commercial bank, 0 Islamic commercial bank.

As with prior studies, this study also included seven control variables – specifically log of firm size, asset tangibility, log of debt-equity ratio, firm age, risk, log of revenue growth and firm type – which are expected to have explanatory power for banks' performance. All the variables are defined and operationalised in Table 1.

Model Specification

This study employed a panel data regression model to examine the relationship between shareholding patterns and banks' financial performance. The Breusch and Pagan (1980) Lagrange Multiplier test (B-P LM) was conducted to choose between the pooled regression model and the alternatives to the panel data regression model (e.g. fixed-effects and random-effects models). The Hausman (1978) specification test was also performed to choose between the fixed-effects model and the random-effects model. This study examined the relationship between five shareholding patterns and banks' financial performance, as measured by ROE, TQ and EVA-log, by estimating following the three models.

$$ROE_{it} = \alpha_0 + \beta_1 DSSH_{it} + \beta_2 INSSH_{it} + \beta_3 GPSH_{it} + \beta_4 GVSH_{it} + \beta_5 FGSH_{it} + \beta_6 FMS\text{-}log_{it} + \beta_7 DER\text{-}log_{it} + \beta_8 ASTAN_{it} + \beta_9 FMY_{it} + \beta_{10} RISK_{it} + \beta_{11} REVG\text{-}log_{it} + \beta_{12} FTYPE_{it} + u_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

$$TQ_{it} = \alpha_{0+} \beta_1 DSSH_{it} + \beta_2 INSSH_{it} + \beta_3 GPSH_{it} + \beta_4 GVSH_{it} + \beta_5 FGSH_{it} + \beta_6 FMS\text{-}log_{it} + \beta_7 DER\text{-}log_{it} + \beta_8 ASTAN_{it} + \beta_9 FMY_{it} + \beta_{10} RISK_{it} + \beta_{11} REVG\text{-}log_{it} + \beta_{12} FTYPE_{it} + u_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$EVA\text{-}log_{it} = \alpha_{0+} \beta_1 DSSH_{it} + \beta_2 INSSH_{it} + \beta_3 GPSH_{it} + \beta_4 GVSH_{it} + \beta_5 FGSH_{it} + \beta_6 FMS\text{-}log_{it} + \beta_7 DER\text{-}log_{it} + \beta_8 ASTAN_{it} + \beta_9 FMY_{it} + \beta_{10} RISK_{it} + \beta_{11} REVG\text{-}log_{it} + \beta_{12} FTYPE_{it} + u_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Where ROE = return on equity, TQ = Tobin's Q, EVA-log = log of economic value added, $\alpha_{0=}$ the constant, t = time, $\beta_{1\ldots5}$ = regression coefficients of each independent variable, u = between-entity error term and ε = within-entity error term. DSSH, INSSH, GPSH, GVSH and FGSH indicate the proportion of equity shares held by sponsor-directors, institutional, general public, government and foreign shareholders, respectively (see Table 1). FMS-log, DER-log, ASTAN, FMY, RISK, REVG-log and FTYPE denote log of firm size, log of debt-equity ratio, asset tangibility, firm age, risk, log of revenue growth and firm type, respectively (see Table 1).

The panel data regression model may, however, provide misleading estimations of the true model if related assumptions – such as multicollinearity, linearity and normality, heteroscedasticity and autocorrelation – are violated. The Shapiro-Wilk W test was performed to check data normality; variance inflation factors (VIF) and tolerance (TOL) statistics were estimated to confirm the presence of a multicollinearity problem between predictor variables. The presence of heteroscedasticity was checked by performing the Breusch-Pagan/Cook-Weisberg test and the existence of autocorrelation problems was verified by performing the Wooldridge test and the Durbin-Watson d test.

RESULTS AND DISCUSSION

The analysis of results begins with the outcomes of the Shapiro-Wilk W test for checking the normality of the dataset. The test indicated that the data related to the EVA, FMS, DER and REVG variables were not normally distributed in their original form (Table 2). Thus, they were normalised by transforming into a log form.

Table 2: Estimations of the Shapiro-Wilk W test

Variables	No. of Observations	Shapiro-Wilk W test (Prob>z)	Original/ Transformed	Conclusion
ROE	145	0.47597	Original	Normal
TQ	145	0.1234	Original	Normal
EVA-log	145	0.46114	Transformed	Normal
DSSH	145	0.06514	Original	Normal
INSSH	145	0.59619	Original	Normal
GPSH	145	0.05354	Original	Normal
GVSH	145	0.17802	Original	Normal
FGSH	145	0.13380	Original	Normal
FMS-log	145	0.57871	Transformed	Normal
DER-log	145	0.09712	Transformed	Normal
ASTAN	134	0.17654	Original	Normal
FMY	145	0.05585	Original	Normal
RISK	145	0.2479	Original	Normal
REVG-log	145	0.05158	Transformed	Normal

Notes: Original means data of the corresponding variables are normally distributed in their original form, while transformed means data of the corresponding variables are not normally distributed in their original form, and thus normalised by transforming them.

Table 3 presents the descriptive statistics for the continuous variables. It shows that the average for return on equity (ROE), with standard deviation, was 12.78% and 4.59, and the range of ROE was 2.52%–24.77% for the study period. These results suggest that the sampled banks earned a moderate level of profit by using their assets for the study period. The results, however, also suggest that the efficiency of the sampled banks' management in using banks' assets to generate returns varied significantly. The average Tobin's Q (TQ) was 1.01, with a range of 0.9–1.13, for the study period. Theoretically, these results indicate that the average market perception towards the sampled banks was marginally good and their shares were slightly overvalued for the study period. However, the minimum value suggests that market perception towards some of the sampled banks was poor and their shares were undervalued. The average for log form of economic value added (EVA-log) was 7.80 (BDT[1] 2,591.45 million[2]), implying that the sampled banks added true value to the shareholders' fund they invested. However, the standard deviation of 0.34 (BDT 909.82 million[3]) and the range of 7.06–8.44

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[1] BDT denotes Bangladeshi Taka, the official currency of Bangladesh.
[2] Figures without log form.
[3] Figures without log form.

(BDT 1,168.28–4,646.07 million[4]) suggest that the ability of the sampled banks to add true value to the shareholders' investment varied significantly.

Table 3: Descriptive Statistics

Variables	No. of Observations	Mean	Std. Deviation	Minimum	Maximum
ROE (%)	145	12.78	4.59	2.52	24.77
TQ	145	1.01	0.05	0.9	1.13
EVA-log	145	7.80	0.34	7.06	8.44
DSSH (%)	145	37.35	15.80	6.73	67.25
INSSH (%)	145	15.47	9.22	0	34.90
GPSH (%)	145	40.60	17.49	6.6	83.45
GVSH (%)	145	4.30	17.35	0	90.19
FGSH (%)	145	1.61	4.81	0	25.7
FMS-log	145	11.97	0.36	11.12	12.61
DER-log	145	2.38	0.25	1.70	2.87
ASTAN	145	0.019	0.008	0.003	.039
FMY (Year)	145	13.91	6.49	5	31
RISK (%)	145	5.05	0.02	2.45	9.00
REVG-Log	145	2.28	1.15	-3.22	4.05

As shown in Table 3, the average proportion and standard deviation of sponsor-directors' shareholding (DSSH) in the sampled banks was 37.35% and 15.08, respectively, with a range of 6.73%–67.25% for the study period. These findings suggest that ownership is concentrated in the banking sector in Bangladesh through sponsor-directors' shareholding. This result supports previous studies in Bangladesh, for example, Farooque et al. (2007), Ahmed (2010) and Hossain (2019), who found concentrated ownership structures in banking companies in Bangladesh. The average shareholding of the general public (GPSH) in the sampled banks was 40.60% with a standard deviation of 17.49 for the study period. These results, therefore, suggest that the general public holds a higher proportion of shareholding, in total, than sponsor-directors, but, in person, every general public shareholder typically holds a lower proportion of equity shares. This kind of shareholding is labelled as diffused ownership pattern and has insignificant voting power and control over the professionals in bank management. The average proportion (standard deviation) of the government (GVSH), institutional (INSSH) and foreign shareholdings (FGSH) in the sampled banks were 4.30% (17.35), 15.47% (9.22) and 1.61% (4.81), respectively, where the

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[4] Figures without log form.

minimum proportion of these shareholdings was 0% over the study period. In general, therefore, it seems that these shareholders did not make an extensive contribution to strategic decision-making and to controlling power over management of a bank. These results further suggest that some of the sampled banks failed to persuade institutions, the government and foreigners to invest in their equity shares over the study period.

As for control variables, the average (standard deviation) size of the sampled banks, as proxied by the log form of total assets (FMS-log) of a sampled bank, was 11.97 (0.36) (BDT 168,737.305 and 9,976.59 million[5], respectively), with a range of 11.12–12.61 (BDT 67,619–300,549.8 million[6]), indicating that the banks included in the sample exhibited significant variation in size in terms of their assets. The average and standard deviation for log form of debt-equity ratio (DER-log) of the sampled banks was 2.38 and 0.25 (11.16% and 2.82[7], respectively), indicating that the sampled banks in Bangladesh were low geared during the study period. The average asset tangibility (ASTAN) was 0.019, with a standard deviation of 0.008, implying that the sampled banks possessed an insignificant volume of long-term assets. A possible reason for banks to have a lower amount of long-term assets, compared to non-financial firms, might be that banks provide financial services (intangible products), rather than producing tangible products, for which they do not invest in long-term assets to protect the interests of investors (Hossain, 2019). The age range of the sampled banks (FMY) was 5–31 years, with an overall average age of 13.91 years and a standard deviation of 6.49. These results provide evidence that a small number of banks have listed on the stock market in recent years, while others were listed a long time ago. The average for log form of revenue growth (REVG-log) and standard deviation was 2.28 and 1.15 (BDT 9,595.07 and 5,113.29 million[8], respectively) with a range of -3.22 to 4.05. Thus, it is credible to hypothesise that the growth of earning of the sampled banks differed significantly during the study period. Finally, the mean of risk (RISK) for the sampled banks, as proxied by the proportion of non-performing loans against gross loans and advances, during the study period was 5.05% with a minimum of 2.45% and a maximum of 9.0%. These results indicate that the overall risk level of the listed sampled banks

[5] Figures without log form.
[6] Figures without log form.
[7] Figures without log form.
[8] Figures without log form.

in Bangladesh during the study period was high; however, the level of risk among the sampled banks varied significantly.

As can be seen from the results of Pearson's correlation matrix presented in Table 4, the range of the correlation between the variables is 0.002–0.725 (regardless of positive or negative sign), suggesting variables are linearly correlated.

Table 4: Pearson's Correlation Matrix

	ROE	TQ	EVA-log	DSSH	INSSH	GPSH	GVSH	FGSH	FMS-log	DER-log	ASTAN	FMY	RISK	REVG-log
ROE	1													
TQ	0.266***	1												
EVA-log	0.367***	0.142*	1											
DSSH	0.185**	0.044	0.152*	1										
INSSH	0.102	0.07	-0.018	0.049	1									
GPSH	0.135*	-0.105	0.115	-0.025	-0.059	1								
GVSH	-0.284	0.345	-0.172	-0.596***	0.123	-0.074	1							
FGSH	0.231**	0.104	0.053	0.196*	-0.185*	-0.03	-0.138	1						
FMS-log	0.202**	-0.24***	-0.29***	-0.066	-0.23***	0.149*	-0.244	0.22**	1					
DER-log	-0.118	0.139*	-0.035	0.296***	-0.039	0.061	0.647***	0.075	-0.042	1				
ASTAN	-0.185**	0.078	-0.14*	-0.008	-0.079	0.069	-0.645***	0.114	0.089	-0.095	1			
FMY	0.109	-0.17**	0.041	-0.635***	-0.151*	0.077	-0.525**	0.097	0.502***	-0.332***	0.21***	1		
RISK	-0.109	-0.078	-0.164*	-0.202**	-0.002	0.015	0.031	-0.008	0.007	-0.215**	0.104	0.139	1	
REVG-log	0.208**	0.204**	0.115	0.011	-0.052	-0.017	0.006	0.091	0.006	0.113	0.016	-0.008	-0.086	1

*Notes: ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10%, respectively.*

As presented in Table 5, the VIF statistics for all explanatory variables are seen to be far below the critical value of 10, and the TOL statistics are seen to be closer to the critical value of 1. These results provide evidence that there is no severe multicollinearity problem in the regression models. The results of the Breusch and Pagan (1980) Lagrange Multiplier test (B-P LM), as reported in Table 5, are seen to be significant in all cases, suggesting that the alternatives to the panel data regression model are preferred to the pooled regression model. As shown in Table 5, the estimations for the Hausman (1978) specification test, are found to be insignificant in all cases, suggesting that the random-effects model is preferred to the fixed-effects model in all panel data regression models (Greene, 2003).

As can be seen from Table 5, estimations for the Breusch-Pagan/Cook-Weisberg tests are insignificant in case of models 1 and 3, but significant in case of model 2, suggesting that heteroscedasticity is probably not a problem in model 1 and 3, but it is a problem in model 2. Estimations of

the Wooldridge test are seen to be significant in all regression models, suggesting that a first-order autocorrelation problem is present in all panel data regression models. Also, estimations of the Durbin-Watson d test (D-W) are less than 1.5 in all cases, confirming the results of the Wooldridge test that there is evidence of a positive autocorrelation problem in the residuals from regression models. Therefore, the random-effects generalised least squares (GLS) with AR(1) disturbances in case of model 1 and 3 and cluster robust standard errors in case of model 2 methods were used to correct for the heteroscedasticity and autocorrelation problems (Hausman, 1978).

Table 5: Estimations for the Multicollinearity Test and the Relationship between Shareholding Patterns and Banks' Financial Performance

	Estimations for the multicollinearity test		Estimations for the random-effects GLS regression analyses		
	VIF	TOL	Model 1 (Dep. Var: ROE)	Model 2 (Dep. Var: TQ)	Model 3 (Dep.Var:EVA-log)
DSSH	3.43	0.29	0.0698(1.89)*	.0003(0.75)	.0097(3.40)***
INSSH	1.79	0.56	-0.0022(-0.05)	-.0008(-1.49)	.0029(0.88)
GPSH	1.93	0.52	0.0310(1.74)*	-.0002(-0.79)	.0031(1.90)*
GVSH	1.53	0.65	-0.1255(-1.01)	.0015(0.73)	-.0136(-1.42)
FGSH	1.30	0.77	0.2454(3.84)***	.0012(1.66)*	.0091(1.86)*
FMS-log	2.23	0.45	-2.2870(-1.72)*	-.0081(-1.75)*	-.4796(-4.69)***
DER-log	1.47	0.68	-3.0702(-1.24)	.0276(1.00)	-.0461(-0.24)
ASTAN	1.17	0.85	-21.6741(-0.45)	1.0561(0.95)	-6.6688(-0.79)
FMY	3.31	0.30	0.5877(0.91)	-.0044(-0.60)	.04986(1.00)
RISK	1.35	0.74	-1.5638(-3.45)***	-.0023(-2.19)**	-.1783(-2.15)**
REVG-Log	1.15	0.87	1.1593(2.23)**	.0119(2.05)**	.0802(2.00)**
FTYPE	1.51	0.66	0.2372(0.28)	-.0022(-0.24)	.1400(1.15)
_cons			46.6922***	0.7661***	2.5166**
Time Dummies			Yes	Yes	Yes
Wald test (X^2)			98.03***	91.28***	74.25***
R^2 (within/between/overall)			.4822/.5414/.4916	.5969/.4813/.4299	.3595/.3009/.3635
No. of observations			145	145	145
B-P LM test (X^2)			15.88***	32.20***	39.48 ***
Hausman test (X^2)			9.86	14.49	12.31
Breusch-Pagan/Cook-Weisberg test (X^2)		0.56		3.74**	0.02
Wooldridge test			29.69***	34.99***	25.89***
Durbin-Watson d test (D-W)			1.27	0.63	0.85

Notes:
***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10%, respectively.
Coefficients are outside the parentheses and z-statistics are within the parentheses.
The Wald test (X^2) was performed to confirm the goodness-of-fit of models.
Heteroscedasticity problems in the panel-data models were checked by the Breusch-Pagan/ Cook-Weisberg test (X^2).
Autocorrelation problems of the panel-data were checked by the Wooldridge test and Durbin-Watson d test.
The B-P LM test (X^2) refers to the Breusch and Pagan (1980) Lagrange Multiplier test for choosing the random-effects model over the pooled OLS model.
The Hausman test (X^2) refers to the Hausman specification test for selecting the appropriate model between fixed-effects and random-effects models.
Multicollinearity problems between the pair of independent variables were checked by tolerance statistics (TOL) and the variance inflated factor (VIF).

Table 5 shows that estimations for the Wald test (X^2) are significant in all cases, indicating the goodness-of-fit of the panel data regression models. Estimations of R^2 (within, between and overall) relative to model 1 suggest that 48.22% of the variation in the ROE within each, 54.14% between each and 49.16% overall of the sampled banks for the study period was captured by the regression model. R^2 in relation to model 2 suggest that shareholding patterns account for 59.69% and 48.13% TQ within and between, respectively, each of the sampled banks and 42.99% TQ overall of the sampled banks for the study period. Relative to model 3, estimations of R^2 within, between and overall suggest that 35.95% of the variation in the EVA-log within each, 30.09% between each and 36.35% overall of the sampled banks for the study periods was captured by the respective regression model.

The regression coefficients for the relationship between FGSH and banks' financial performance, as measured by ROE, TQ and EVA-log, are positive and statistically significant for the study period. These results, therefore, reject hypothesis five (H_5). The results suggest that foreign shareholding enhances shareholders' equity return and market value of the sampled banks and eventually adds true value to shareholders' investment in the sampled banks in Bangladesh. Despite foreign shareholding accounting for an average of only 1.61% of the total shareholding of the sampled banks, it was found to have a significant effect on banks' performance. The results support those of Sarkar and Sarkar (2000), Dwivedi and Jain (2002), Arouri et al. (2014), Bentivogli and Mirenda (2017) and Kao et al. (2019).

The positive relationship between foreign shareholding and banks' performance might be interpreted that foreign ownership in banking firms in Bangladesh provided better information and encouraged the adoption of superior practices in such areas as information disclosure, internal checks

and balances and accounting standards, and that this contributed to the enhanced performance of the banks. Another plausible explanation for this result is that foreign investment in the banks may have worked as a channel for bringing improved technology, sufficient capital, managerial skills, training techniques and various intangibles that promoted the efficiency of the banks' management and led to better performance.

As for the relationship between GPSH and banks' financial performance, as measured by ROE, TQ and EVA-log, this study finds mixed results. For example, GPSH is positively and statistically significantly related to ROE and EVA-log; however, it is insignificantly related to TQ. The results in relation to ROE and EVA-log reject hypothesis three (H_3), but those related to TQ fail to reject the same hypothesis. Theoretically, these results suggest that a higher proportion of general public shareholding increases returns on shareholders' equity and adds true value to shareholders' investment, but it fails to impress the market of the sampled banks in Bangladesh. The result pertaining to ROE is similar to Leech and Leahy (1991) and Hoque et al. (2013); however, it contrasts with Mollah et al. (2012) and Ahmed (2010). The result related to TQ supports those of Ahmed (2010) and Mollah et al. *(*2012), who found general public shareholding to have an insignificant effect on the TQ of the banks and firms listed on the Dhaka and Botswana Stock Exchanges, respectively.

General public shareholding is known as a diffused form of ownership. Its insignificant relationship with market-based performance suggests that the general public are unable to contribute significantly to monitoring the banks' management by involving themselves in strategic decision-making, which makes them powerless to control the professional managers, and, thus, they make no contribution to impressing market perception.

As with GPSH to banks' performance, the study also finds mixed results as for the relationship between DSSH and banks' performance. For example, DSSH is positively and statistically significantly associated with ROE and EVA-log; however, there is no evidence of a significant relationship between DSSH and TQ. The results regarding ROE and EVA-log reject hypothesis one (H_1), but those related to TQ fail to reject the same hypothesis. Theoretically, the results with regard to ROE and EVA-log support the incentive alignment hypothesis. According to the

hypothesis, it is presumed that sponsor-directors' shareholders contributed positively to the board in making decisions by using inside information; consequently, their high proportion of shareholding in the listed sampled banks in Bangladesh increases returns on shareholders' equity and also adds true value to shareholders' investment. Empirically, the result with respect to ROE is consistent with Mehran (1995), Chu (2011) and Arouri et al. (2014), who found a positive association between sponsor-directors' shareholdings and accounting return-based performance. The result related to TQ is similar to Tsetsekos and DeFusco (1990), El Mehdi (2007) and Mollah et al. (2012).

Turning now to the nexus of other shareholding patterns with banks' performance, Table 5 shows that INSSH and GVSH are statistically insignificantly related to ROE, TQ and EVA-log for the study period, thus support hypotheses two and four (H_2 and H_4), respectively. In general, therefore, the results seem to show that institutional and government shareholdings do not give rise to improved profit-based, market-based and value-based financial performance in the sampled banks in Bangladesh. Despite these two shareholding patterns accounting for an average of 19.77% of the total shareholdings of the sampled banks, they are found not to add value for the sampled banks. Empirically, the result related to the relationship of institutional shareholding with ROE and TQ are in line with those of Ahmed (2010) and Mollah et al. (2012), and the results regarding government shareholding reflect those of Mollah et al. (2012) and Arouri et al. (2014).

With regard to the control variables, a significant positive relationship was found between revenue growth (REVG-log) and banks' performance, as measured by ROE, TQ and EVA-log. These results suggest that high growth of revenue increases returns on the stockholders' equity, positively impresses the market of the sampled banks and adds true value to the shareholders' investment over the study period. The statistically significant positive relationship between revenue growth and banks' performance is consistent with expectation, theory and prior empirical evidence. For example, Klapper and Love (2004) documented that firms having higher revenue growth yielded a higher return on assets and led to the higher market value of the firms. Similarly, Shabbir and Padget (2005) revealed that faster-growing in revenue caused a higher return on assets of the firms.

In contrast, firm size (FMS-log) and risk (RISK) are found to be negatively and statistically significantly related to banks' performance, as measured by ROE, TQ and EVA-log. The results related to firm size are contrary to expectations as the results suggest that banks having greater assets experienced a reduction in their financial performance. Presumably, this is a cumulative effect and the reflection of the high volume of non-performing loans in the banking sector in Bangladesh. This presumption is supported by the statistically significant negative relationship between risk, as proxied by non-performing loans and advances, and banks' performance, which suggest that current high volume of non-performing loans and advances has a detrimental effect on return on shareholders' equity, market perception and true shareholder value of the sampled banks in Bangladesh. This is because a high volume of non-performing loans and advances is a regular phenomenon for all state-owned banks and some private commercial and specialised banks. The state-owned and specialised banks are larger in size in terms of their total assets. According to the Bangladesh Bank (2018), the percentage of non-performing loans for state-owned commercial banks until the end of the financial year 2017–2018 was 28.2%, of which 47% accounted for the five state-owned banks, the highest rate in the most recent decade.

On the other hand, debt-equity ratio (DER-log), firm age (FMY), asset tangibility (ASTAN) and firm type (FTYPE) were found to have an insignificant relationship with ROE, TQ and EVA-log. It can be seen from the descriptive statistics in Table 3 that the sampled banks were low geared, indicating that the level of core deposits of the sampled banks was relatively low for the study period. This is a disappointing finding for the sampled banks, as a relatively high gearing is common in the banking industry. It could conceivably be hypothesised that depositors found alternative sources of investment with higher returns than the rate of interest offered by banks, as suggested by Hoque et al. (2013). The results related to firm age imply that older banks were unable to enjoy the benefits of learning, that they were unable to avoid the liabilities of newness by investing in research and development, and that they failed to discover what they were good at. This result is consistent with Loderer and Waelchli (2009). The results concerning asset tangibility imply that the sampled banks failed to use their fixed assets to enhance their performance. This result validates that of Muritala (2012). The results in relation to firm type reveal that traditional commercial banks do not perform better than Islamic commercial banks and *vice versa*.

CONCLUSION

This study sought to examine the relationship between shareholding patterns and the financial performance of the banking sector in Bangladesh for the period 2013–2017. Five patterns of shareholdings (viz. sponsor-directors, institutional, general public, government and foreign shareholdings) were considered as the explanatory variables of interest in the study. In addition, seven control variables (viz. firm size, asset tangibility, debt-equity ratio, firm age, revenue growth, risk and firm type) were also included in the random-effects GLS regression models. As dependent variables, alternative financial performance measures – namely profit-based, market-based and value-based measures, as measured by ROE, TQ and EVA-log, respectively – were included in the developed regression models.

This study has found a mixed result, i.e. there is a relationship between some, but not all of the patterns of shareholdings and financial performance of the listed banks in Bangladesh. For example, a significant positive relationship between foreign shareholding and banks' financial performance was noticed, so that this can be considered to be a value-adding pattern of shareholding. Sponsor-directors and general public shareholdings were found to add value in return on equity and to add true value to the shareholders' investment, but that these fail to influence the market perception towards the sampled banks. However, the institutional and government shareholdings were found to have no effect on the banks' financial performance, regardless of the measures used to assess them.

The findings of this study extend the empirical literature relating to the relationship between shareholding patterns and performance. The findings also have some implications for policy makers and regulatory bodies in the banking sector in Bangladesh, as they suggest the need to rethink and to reform the current shareholding patterns of the banks, in order to enhance equity returns, to impress the market and to add true value to shareholders' investment. This is because institutional and governmental shareholdings do not add value to shareholders' investment, while foreign shareholding has been demonstrated by the study to be the most effective, value-enhancing pattern of shareholding. Also, general public and sponsor-directors' shareholdings are value adding patterns of shareholding in the sampled banks in Bangladesh.

The study involves some limitations. For example, it excludes other governance variables, which may explain the financial performance of the sampled banks, such as managerial, family and non-family managerial patterns of shareholding. Therefore, the study reveals avenues for future research and further methodological improvement. Among these, it is worth mentioning an increase in the number of independent variables by including a broader range of governance parameters and a re-examination of the relationship with financial performance by including changes in accounting standards and additional dimensions of shareholding patterns.

CORRESPONDING AUTHOR

Mohammad Kamal Hossain
Department of Accounting and Information Systems
Jashore University of Science and Technology
Email: karunu2003@yahoo.com

REFERENCES

Aghion, P., Reenen, J. V., & Zingales, L. (2009). Innovation and Institutional Ownership. *American Economic Review*, 103(1), 277-304. doi: 10.1257/aer.103.1.277

Ahmed, H. (2010). *Corporate Governance Structure and Performance of Listed Banking Companies in Bangladesh* (Unpublished Postdoctoral Dissertation). Corvinus University of Budapest, Hungary.

Akhigbe, A., McNulty, J. E., & Stevenson, B. A. (2017). Does the Form of Ownership Affect Firm Performance? Evidence from US Bank Profit Efficiency Before and During the Financial Crisis. *The Quarterly Review of Economics and Finance,* 64, 120-129. doi.org/10.1016/j.qref.2016.07.015

Al-Najjar, B. (2015). Does Ownership Matter in Publicly Listed Tourism Firms? Evidence from Jordan. *Tourism Management*, 49, 87-96. doi.org/10.1016/j.tourman.2015.02.008

Al-Sa'eed, M. A. A. (2018). The Impact of Ownership Structure and Dividends on Firm's Performance: Evidence from Manufacturing Companies Listed on the Amman Stock Exchange. *Australasian Accounting, Business and Finance Journal,* 12(3), 107-126. doi: 10.14453/aabfj.v12i3.7

Amin, A. A., & Hamdan, A. M. (2018). Evaluating the Effect of Ownership Structure on Firm Performance: Evidence from Saudi Arabian Listed Companies. *Journal of Economic Cooperation and Development,* 39 (3), 65-92.

Ananchotikul, S. (2006). Does Foreign Investment Really Improve Corporate Governance? Evidence from Thailand. Retrieved from http://www.econ.tu.ac.th/doc/.../123/seminar_aug27_sudarat_appendix.pdf

Arouri, H., Hossain, M., & Muttakin, M. B. (2014). Effects of Board and Ownership Structure on Corporate Performance: Evidence From GCC Countries. *Journal of Accounting in Emerging Economies,* 4(1), 117-130. doi: 10.1108/JAEE-02-2012-0007

Baker, H. K., Deo, P., & Mukherjee, T. (2009). EVA Revisited. *Journal of Financial Education,* 35, 1-22. Retrieved from https://www.jstor.org/stable/41948621

Bangladesh Bank (2018). Annual Report. Retrieved from https://www.bb.org.bd/pub/annual/anreport/ar1718/index1718.php

Barzegar, B., & Babu, K. N. (2008). The Effects of Ownership Structure on Firm Performance: Evidence from Iran. *The Icfai Journal of Applied Finance*, 14(3), 43-55.

Bebchuk, L. A. (1999). A Rent-Protection Theory of Corporate Ownership and Control. NBER Working Paper Series 7203, National Bureau of Economic Research 1050, Massachusetts Avenue Cambridge. Retrieved from http://www.law.harvard.edu/faculty/bebchuk/pdfs/nber7203.99.pdf

Bentivogli, C., & Mirenda, L. (2017). Foreign Ownership and Performance: Evidence from Italian Firms. *International Journal of the Economics of Business*, 24(3), 251-273. doi.org/10.1080/13571516.2017.1343542

Berle, A. A., & Means, G. (1932). *The Modern Corporation and Private Property.* New York: MacMillan Co.

Boardman, A. E., & Vining, A. R. (1989). Ownership and Performance in Competitive Environments: A Comparison of the Performance of Private, Mixed and State-Owned Enterprises. *Journal of Law & Economics,* 32, 1-33. Retrieved from http://www.jstor.org/stable/725378

Borisova, G., Salas, M. J., & Zagorchev, A. (2009). Government Ownership and Corporate Governance: Evidence from the EU. Retrieved from http://www90.homepage.villanova.edu/michael.pagano/JS_corporate_governance.pdf

Boyko, M., Shleifer, A., & Vishny, R. (1995). *A Theory of Privatization*. Mimeo: Harvard University.

Breusch, S., & Pagan, R. (1980). The Lagrange Multiplier Test and Its Applications to Model Specification in Econometrics. *Review of Economic Studies,* 47(1), 239-253. doi: 10.2307/2297111

Chancharat, S., & Chancharat, N. (2019). Board Structure, Ownership Structure and Performance of Thai Listed Companies. *Australasian Accounting, Business and Finance Journal*, 13(3), 53-70. doi:10.14453/aabfj.v13i3.4

Chu, W. (2011). Family Ownership and Firm Performance: Influence of Family Management, Family Control and Firm Size. *Asia Pacific Journal of Management,* 28(4), 833-851. doi.org/10.1007/s10490-009-9180-1

City Bank. (2018). *Annual Report*. Retrieved from https://www.thecitybank.com/report/annualreports

Dhaka Bank. (2018). *Annual Report.* Retrieved from https://dhakabankltd.com/wp-content/uploads/2019/05/Annual-Report-2018.pdf

Din, S. M. U., Abu-bakar, A., & Regupathi, A. (2017). Does Insurance Promote Economic Growth: A Comparative Study of Developed and Emerging/Developing Economies. *Cogent Economics & Finance,* 5(1), 1-12. doi.org/10.1080/23322039.2017.1390029

Dwivedi, N., & Jain, A. K. (2005). Corporate Governance and Performance of Indian Firms: The Effect of Board Size and Ownership. Retrieved from http://www.ingentaconnect.com/content/klu/errj/2005/00000017/00000003/00006939

Dybvig, P. H., & Warachka, M. (2015). Tobin's Q does not Measure Performance: Theory, Empirics and Alternative Measures. Working Paper, Washington University in Saint Louis and Singapore Management University. doi.org/10.2139/ssrn.1562444

El Mehdi, K. (2007). Empirical Evidence on Corporate Governance and Corporate Performance in Tunisia. *Corporate Governance: An International Review*, 15(6), 1429-1441. doi: 10.1111/j.1467-8683.2007.00655.x

El-Habashy, H. A. (2019). The Effects of Board and Ownership Structures on the Performance of Publicly Listed Companies in Egypt. *Academy of Accounting and Financial Studies Journal*, 23(1), 1-15.

Elyasiani, E., & Jia, J. (2010). Distribution of Institutional Ownership and Corporate Firm Performance. *Journal of Banking and Finance,* 34(3), 606-620. doi.org/10.1016/j.jbankfin.2009.08.018

Fama, E. F., & Jensen, M. C. (1983). Separation of Ownership and Control. *Journal of Law and Economics,* 26(2), 301-325. Retrieved from https://www.jstor.org/stable/725104

Farooque, O. A., Zijl T. V., Dunstan, K., & Karim, A. K. M. W. (2007). Corporate Governance in Bangladesh: Link between Ownership and Financial Performance. *Corporate Governance: An International Review*, 15(6), 1453-1468. doi.org/10.1111/j.1467-8683.2007.00657.x

Farooque, O. A., Zijl, T. V, Dunstan, K., & Karim, A. K. M. W. (2010). Co-deterministic Relationship between Ownership Concentration and Corporate Performance Evidence from an Emerging Economy. *Accounting Research Journal,* 23(2), 172-189. doi: 10.1108/10309611011073250

Fazlzadeh, A., Hendi, A. T., & Mahboubi, K. (2011). The Examination of the Effect of Ownership Structure on Firm Performance in Listed Firms of Tehran Stock Exchange Based on the Type of the Industry. *International Journal of Business and Management*, 6(3), 249-266. doi: 10.5539/ijbm.v6n3p249

Méndez, C. F., & Gomez-Anson, S. (2005). Does Ownership Structure affect Firm Performance? Evidence from a Continental-type Governance System. *Corporate Ownership and Control,* 3(2), 75-89. doi: 10.22495/cocv3i2p9

Firth, M., Fung, Y., & Rui, M. (2002). Simultaneous Relationships among Ownership, Corporate Governance and Financial Performance. Working Paper, Lingnan University, Tuen Mun. doi: 10.2139/ssrn.337860

Gorton, G., & Schmid, F. (1996). Universal Banking and the Performance of German Firms. Working Paper 5453, NBER.

Greene, W. H. (2003). *Econometric Analysis* (5th ed.). Prentice-Hall: Upper Saddle River, NJ.

Hausman, J. (1978). Specification Tests in Econometrics. *Econometrica,* 46, 1251-1271. doi: 10.2307/1913827

Hiraki, T., Hideaki, I., Ito, A., Kuroki, F., & Masuda, H. (2003). Corporate Governance and Firm Value in Japan: Evidence from 1985 to 1998. *Pacific-Basin Finance Journal,* 11, 239-65. doi.org/10.1016/S0927-538X(03)00023-4

Hoque, M. Z., Islam, M. R., Ahmed, H. (2013). Corporate Governance and Bank Performance: The Case of Bangladesh. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2208903

Hossain, M. K. (2019). *Relationship between Internal Corporate Governance Mechanisms and Shareholder Value in the Banking Sector in Bangladesh: The Mediating Role of Non-Equity Stakeholders* (Unpublished Doctoral Dissertation). University of Cardiff Metropolitan, UK.

Hossain, M. K., Salam, M. A., & Sen, T. (2017). Measurement of Financial Performance of a Commercial Bank from Varied Perspectives: A Case Study of Islami Bank Bangladesh Limited. *Business Review-A Journal of Business Administration Discipline,* 12(1&2), 53-64.

Hu, Y. (2008). The Relationship Between Ownership and Performance: A Review of Theory and Evidence. *International Business Research,* 1(4), 72-81. doi: 10.5539/ibr.v1n4p72

Imam, M. O., & Malik, M. (2007). Firm Performance and Corporate Governance Through Ownership Structure: Evidence from Bangladesh Stock Market. *International Review of Business Research Papers,* 3(4), 88-110. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2256480

Ironkwe, U. I., & Emefe, P. (2019). Corporate Ownership Structure on Financial Performance of Quoted Companies in Nigeria. *International Journal of Advanced Academic Research-Social and Management Sciences,* 5(4), 67-87.

Jensen, M. C., & Meckling, W. H. (1976). Theory of Firms, Managerial Behaviours, Agency Costs and Ownership Structure. *Journal of Financial Economics,* 3(4), 305-360. doi.org/10.1016/0304-405X(76)90026-X

Kao, M. F., Hodgkinson, L., & Jaafar, A. (2019). Ownership Structure, Board of Directors and Firm Performance: Evidence from Taiwan. *Corporate Governance,* 19(1), 189-216. doi.org/10.1108/CG-04-2018-0144

Khamis, R., Elali, W., & Hamdan, A. (2015). Ownership Structure and Corporate Financial Performance in Bahrain Bourse. *Journal of Corporate Ownership & Control,* 13(1), 413-434. doi:10.22495/cocv13i1c4p1

Khan, A., Balachandran, B., & Mather, P. (2007). *Managerial Share Ownership and Firm Performance: Evidence from Australia.* Paper presented at Accounting and Finance Association of Australia and New Zealand (AFAANZ) Conference, July, Gold Coast.

Khan, N., & Siddiqua, P. (2015). The Impact of Family Ownership on Firm Value and Corporate Governance: Evidence from the Financial Sector of Bangladesh. *Journal of Business Studies,* XXXVI (3), 83-101.

Klapper, L. F., & Love, I. (2004). Corporate Governance, Investor Protection, and Performance in Emerging Markets. *Journal of Corporate Finance,* 10, 703-728.

Kumar, J. (2002). Does Ownership Structure Influence Firm Value? Evidence from India. Retrieved from http://www1.fee.uva.nl/fm/ Conference/ Hyderabad/Jayesh_CG.pdf

La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate Ownership around the World. *The Journal of Finance*, 54(2), 471-517. doi.org/10.1111/0022-1082.00115

Laiho, T. (2011). *Agency Theory and Ownership Structure-Estimating the Effect of Ownership Structure on Firm Performance* (Unpublished Master's Thesis). Aalto University.

Leech, D., & Leahy, J. (1991). Ownership Structure, Control Type Classifications and the Performance of Large British Companies. *Economic Journal,* 101(409), 1418-1437. doi: 10.2307/2234893

Loderer, C., & Waelchli, U. (2009). Firm Age and Performance. Retrieved from http://www.bi.no/InstitutterFiles/Finansiell%20%C3%B8kono mi/Firm_age_performance.pdf

Manawaduge, A. S. P. G. (2012). *Corporate Governance Practices and their Impacts on Corporate Performance in an Emerging Market: The Case of Sri Lanka* (Unpublished Doctoral Dissertation). University of Wollongong, Australia.

Megginson, W. (2005). *The Financial Economics of Privatization*. New York: Oxford University Press.

Mehran, H. (1995). Executive Compensation Structure, Ownership and Firm Performance. *Journal of Financial Economics,* 38, 163-184. doi. org/10.1016/0304-405X(94)00809-F

Mohammed, A. M. (2018). The Impact of Ownership Structure on Firm Performance: Evidence from Jordan. *Academy of Accounting and Financial Studies Journal,* 22(5), 1-9.

Mollah, S., Farooque, O. A., & Karim, W. (2012). Ownership Structure, Corporate Governance and firm Performance: Evidence from an African Emerging Market. *Studies in Economics and Finance,* 29(4), 301-319. doi.org/10.1108/10867371211266937

Muritala, T. A. (2012). An Empirical Analysis of Capital Structure on Firms' Performance in Nigeria. *International Journal of Advances in Management and Economics,* 1(5), 116-124.

Muttakin, M. B., & Ullah, M. S. (2012). Corporate Governance and Banking Performance: Evidence from Bangladesh. *Corporate Board, Role, Duties and Composition,* 8(1), 62-68. doi.org/10.22495/cbv8i1art5

Muttakin, M. B., Khan, A., & Subramaniam, N. (2014). Do Families shape Corporate Board Structure in Emerging Economies? In Boubaker, S., & Nguyen, D. K. (eds.). *Corporate Governance in Emerging Markets, Theories, Practices and Cases,* Springer-Verlag, Berlin Heidelberg, 109-131. doi: 10.1007/978-3-642-44955-0_5

National Bank. (2018). *Annual Report*. Retrieved from https://www.nblbd. com/assests/financial/annual/NBL_Annual_Report_2018.pdf

Ntim, C. G. (2009). *Internal Corporate Governance Structures and Firm Financial Performance: Evidence from South African Listed Firms* (Unpublished Doctoral Dissertation). University of Glasgow, England.

Organisation for Economic Cooperation and Development (2004). *OECD Principles of Corporate Governance (*2nd ed.). Paris, France: Author.

Rafiei, M., & Far, S. A. (2014). Effect of State Ownership on Firm Performance and Dividend Payout Policy. *International Journal of Academic Research in Business and Social Sciences,* 4(7), 213-219.

Shabbir, A., & Padgett, C. (2005). The UK Code of Corporate Governance: Link between Compliance and Firm Performance, Working Paper, ICMA Centre, available at: http://ssrn.com/abstract=934313

Sarkar, J., & Sarkar, S. (2000). Large Shareholder Activism in Corporate Governance in Developing Countries: Evidence from India. *International Review of Finance,* 1(3), 161-194. doi.org/10.1111/1468-2443.00010

Tam, O. K., & Tan, M. G. (2007). Ownership, Governance and Firm Performance in Malaysia. *Corporate Governance,* 15, 208-222. doi.org/10.1111/j.1467-8683.2007.00555.x

Tsetsekos, G. P., & DeFusco, R. (1990). Portfolio Performance, Managerial Ownership and the Size Effect. *The Journal of Portfolio Management,* 15(1), 13-18. doi.org/10.3905/jpm.1990.409270

Tusiime, I., Nkundabanyanga, K. S., & Nkote, N. I. (2011). Corporate Governance: Ownership Structure, Board Structure and Performance of Public Sector Entities. *Journal of Public Administration and Policy Research*, 3(9), 250-260. doi: 10.5897/JPAPR10.001

Welch, E. (2003). The Relationship between Ownership Structure and Performance in Listed Australian Companies. *Australian Journal of Management,* 28(3), 287-305. doi.org/10.1177/031289620302800304

Wruck, K. H. (1988). Equity Ownership Concentration and Firm Value: Evidence from private equity financings. *Journal of Financial Economics,* 23, 3-28. doi.org/10.1016/0304-405X(89)90003-2

Xu, X., & Wang, Y. (1999). Ownership Structure and Corporate Governance in Chinese Stock Companies. *China Economic Review*, 10(1), 75-89. doi.org/10.1016/S1043-951X(99)00006-1

Yarram, S., Balachandran, B., & Sivalingam, G. (2007). *Ownership and Performance: Evidence from an Emerging Market.* Paper presented at the Singapore Economic Review Conference, August, Singapore.