

# **DO CORPORATE GOVERNANCE MECHANISMS TRULY ACT AS THE DRIVERS OF SHAREHOLDER VALUE IN THE BANKING SECTOR IN BANGLADESH? EVIDENCE FROM THE ECONOMIC PROFIT PERSPECTIVE**

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## **ABSTRACT**

This study examines whether corporate governance mechanisms (CGMs) truly act as the drivers of shareholder value (SV) in the banking sector in Bangladesh from the economic profit perspective. The study employs a random-effects model to test hypotheses in a sample of 29 banks listed on the Dhaka Stock Exchange for the period 2014–2018. Relying on the test results of CGMs on SV measured from the economic profit perspective, this study finds that only the independent audit committee acts as a driver of truly creating shareholder value. Contrary to expectations, other CGMs in the analysis (e.g. board size, independent non-executive directors, audit committee size, audit committee meetings, and institutional shareholding) are not found to create true shareholder value. The outcomes of the study are a matter of concern for the regulatory bodies of the Bangladeshi banking sector and institutions involved in constructing the code of corporate governance, as the existing CGMs are suboptimal in the sense that they do not truly act as value-driving mechanisms for shareholder value.

**Keywords:** Corporate governance mechanisms, shareholder value, economic profit perspective, banking sector, Bangladesh.

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## 1. INTRODUCTION

Over the decades, extensive research has been undertaken in developed markets (e.g. Bansal & Sharma, 2016; Pham, 2016; Duppati et al., 2017; Yasser et al., 2017; Gafoor et al., 2018; Kabir et al., 2019; Almoneef & Samontaray, 2019; Majeed et al., 2020) and emerging market economies, like Bangladesh (e.g. Al Farooque et al., 2007; Ahmed, 2010; Muttakin & Ullah, 2012; Hossain, 2020), attempting to prove the efficacy of country-level corporate governance structures in enhancing firm performance or creating value for shareholders. These studies typically measured firm performance in terms of accounting returns, such as ROA, ROE, EPS, ROS, EBIT, EAT, and ROCE, or market returns, such as Tobin's Q (Tq), market value added (MVA), and share price (SP), among others. Relevant stakeholders use these performance measures to assess current and future firm performance (Worthington & West, 2001). However, these metrics are inadequate in representing true firm performance and are unable to account for the factors driving shareholder value (SV) (Venanzi, 2010), as firms have begun to prioritise SV over profit as the primary goal of business enterprises (Worthington & West, 2001).

Accounting return performance metrics contain many inherent flaws. First, they can be methodically distorted or manipulated within the accounting frameworks (Mollah et al., 2012). Second, they may also be biased in the case of tax regulations and extraordinary gains and losses that cause short-term variations in corporate revenues (Mollah et al., 2012). Third, firms can enhance accounting return performance instantly by decreasing discretionary expenses (e.g. customer-caring costs, R&D expenses, building maintenance costs, employees' training and development costs, quality control costs, advertising) that make the firm fail to achieve the desired position. Consequently, the sustainable profitability of firms is badly affected, and SV is compromised, meaning that these measures are incongruent with firms' goal of maximising shareholder wealth (Venanzi, 2010). Finally, they do not take into account the cost of capital in terms of the risk-free rate and risk premium (Worthington & West, 2001; Venanzi, 2010).

Similarly, market return performance metrics also poorly reflect the true performance of firms for many reasons. First, stock prices or other metrics related to the stock market may not reflect firms' actual market performance all the time, particularly if the country's stock market is inefficient and inconsistent (Al Farooque et al., 2019). Second, these metrics may provide erroneous market performance because of distorted accounting returns. For example, high accounting returns achieved by way of distortions or manipulations within accounting policies and estimates help maintain or increase the share price of firms (Venanzi, 2010). Finally, Tq, one of the most commonly used market return performance metrics in management, may erroneously define firm performance, particularly in the situation of inefficiency due to under-investment that indicates Tq value is high while financial performance is poor (Dybvig & Warachka, 2012). Also, the calculation of Tq encompasses measurement errors due to the unavailability of data regarding the replacement costs of tangible assets, which in turn produce misleading results about firms' market performance.

For decades, shareholders and corporate management have been looking for an appropriate and reliable metric of firm performance that robustly assesses the extent of shareholder wealth creation (Lee, 1996). One innovation in performance management is the economic value added — EVA (Worthington & West, 2001) — that challenges the domination of traditional metrics for the last two decades (Stewart, 1991). EVA represents a firm's true economic profit, reflecting

SV. For many reasons, it provides firms' true financial performance better than the performance metrics related to accounting returns and market returns. First, many balance sheet items (e.g. marketing and promotions, R & D, depreciation, allowances for doubtful debts, inventory write-downs, and deferred tax provisions) are adjusted to bring the traditional accounting profit much closer to the true economic profit (Stewart, 1991). These adjustments prevent potential distortion by the accountants within the accounting frameworks (Pham et al., 2011). Second, unlike accounting return performance measures that only consider the cost of debt, EVA takes into consideration both the costs of equity and debt capital and financing risk-return; thus, the extent of value creation for shareholders is known truly (Stewart, 1991). Finally, EVA is also not sensitive to exogenous economic factors and thus indicates firms' growth opportunities more accurately than Tq (Pham et al., 2011).

Many leading companies across the world (e.g. AT & T, Briggs & Stratton, CSX, Coca-Cola, Quaker Oats, the ANZ Banking Group) have adopted EVA as a financial performance indicator because of its genuinity in calculating true value creation for shareholders over a given period (Worthington & West, 2001). For more than a decade, the banking sector in Bangladesh has also been employing it as a performance metric along with traditional accounting return and market return perspective performance metrics. So far, many empirical studies (e.g. Huang & Liu, 2010; Al Mamun et al., 2014; Pamburai et al., 2015; Yasser & Al Mamun, 2015; Arezumandi & Pourparvin, 2016; Yasser et al., 2017; Kabir et al., 2019) have been conducted to verify the effectiveness of corporate governance structures on SV, as measured by EVA, in the context of developed and developing market economies, with none focusing on the banking sector in Bangladesh. The results may not be pertinent to the banking sector in Bangladesh due to significant institutional differences between Bangladesh and developed and emerging market economies. Corporate governance structures and practices, legal systems, and ownership structures are among the key differences (Al Farooque et al., 2007). This fact raises a key policy question: whether the current corporate governance structure can ensure true value creation for the shareholders of listed banks in Bangladesh, which remains to be explored. Therefore, this study aims to examine whether existing corporate governance mechanisms (CGMs) put in place in the banking sector in Bangladesh contribute to the SV as measured by EVA, which represents true bank performance.

This study differs from previous Bangladeshi studies on CGMs and SV in two ways. First, it examines the efficacy of existing CGMs adopted by listed banks in Bangladesh for SV, measured from the economic profit perspective. Second, an attempt is made to empirically compare the results of the existing CGMs' impact on SV, measured from the accounting returns and market returns perspectives, with those from the economic profit perspective, because the latter two perspectives do not truly reflect SV and the results are often misleading and possibly questionable.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This study examines whether CGMs move as the driving force for SV measured from the economic profit perspective (proxied by EVA), the accounting return perspective (proxied by ROE), and the market return perspective (proxied by Tq). Relevant theories and prior studies on corporate governance document that CGMs do not have a similar effect on SV, leading to developing hypotheses for each mechanism separately.

### 2.1. Board Size and Shareholder Value

Agency theory posits that a smaller board effectively boosts shareholder value (Sonnenfeld, 2002), as it is easier to coordinate a few board members leading to reduced agency problems (Yawson, 2006). Organisational theory also postulates that members of smaller boards become more effective as the associated advantages of coordination are likely to outweigh the benefits gained from the talent of members of a smaller board (Pfeffer, 1973); in so doing, operating efficiency is enhanced, leading to shareholder value creation. There are many studies to support the theoretical arguments, e.g. Pham (2016) and Duppati et al. (2017) demonstrate the positive effect of smaller boards on shareholder value as measured by ROA, ROE, and Tq.

The Bangladesh Securities and Exchange Commission (BSEC) (2012) provided an obvious guideline that the corporate board should be restricted between 5 and 20. Prior studies (e.g. Ahmed, 2010; Hossain, 2020) revealed that the average board size of the banking sector in Bangladesh is large and consists of more than 13 directors, conforming to the resource dependency theory. The resource dependency theory and several empirical studies (e.g. Yasser et al., 2017; Gafoor et al., 2018; Almonneef & Samontaray, 2019) argue for larger boards to enhance shareholder value. The arguments are that a larger board offers greater access to the external business environment and brings knowledge, diversified skills, business contacts, wider perspectives, experience, and intellect to the board, thereby reducing uncertainties and offering the best opportunity to secure critical corporate resources (Mollah et al., 2012). Consequently, a firm's problem-solving capacity increases, thereby maximizing shareholder value. Thus, the first hypothesis being tested in this study is:

*H<sub>1</sub>: Board size acts as a positive driver of shareholder value, as measured by EVA, ROE, and Tq.*

### 2.2. Independent Non-Executive Directors and Shareholder Value

The BSEC (2012) explicitly states that the corporate board in Bangladesh shall be formed with a minimum of 20% of independent non-executive directors (INEDs). Strong theoretical and empirical reasons support the inclusion of INEDs on the board. The resource dependency theory considers INEDs as boundary spanners because they extract resources from the external environment through social networks or ties (Pfeffer, 1972). This link may facilitate access to critical resources, such as experience, expertise, business contacts, and reputation, which insider executive directors may exploit to increase performance (Haniffa & Hudaib, 2006; Luan & Tang, 2007). Some empirical studies stand by this theoretical premise. For example, Huang and Liu (2010) suggested a positive relationship between INEDs and shareholder value, measured by EVA, of all companies listed on the Taiwan Stock Exchange. Recently, Kabir et al. (2019)

documented the same results by employing a sample comprised of 89 listed manufacturing firms in Nigeria. Considering the shareholder value measured by Tq, Weir et al. (2002) and Sobhan (2014) empirically found a positive relationship between the two variables in listed UK firms and Bangladeshi non-financial firms, respectively. In terms of shareholder value measured by ROE, Luan and Tang (2007), Muttakin and Ullah (2012), and Giráldez and Hurtado (2014) suggested a positive effect of INEDs on shareholder value. These studies argued that INEDs deliver impartial judgement on board decisions and share knowledge and skills that enable firms to enhance their reputation. Also, their impartiality and neutral attitudes lead them to ignore courtesy and sympathy, which impair reality and honesty and deter productive criticism of insider executive directors in the boardroom. Sanda et al. (2005) argue that INEDs can bring fair-mindedness, reasonableness, and aptitude to affect board choices. They also make management activities accountable through extreme observation. As a result, boards that consist of a higher proportion of independent directors can secure more resources from the market, which can be used to create shareholder value under the effective monitoring of INEDs (Luan & Tang, 2007). Therefore, the second relevant hypothesis being tested in this study is:

*H<sub>2</sub>: Independent non-executive directors act as a positive driver of shareholder value, as measured by EVA, ROE, and Tq.*

### **2.3. Attributes of the Audit Committee and Shareholder Value**

The BSEC (2012) states that “the Audit Committee shall assist the Board in ensuring that the financial statements reflect the true and fair view of the state of affairs of the company and in ensuring a good monitoring system within the business” (BSEC, 2012, p.17). As a corporate governance mechanism, different attributes of the audit committee (e.g. its independence, size, frequency of meetings) ensure an effective internal control system that assists in reducing pecuniary fraud (Al Mamun et al., 2014). An independent audit committee facilitates the timely release of unprejudiced accounting information to shareholders, leading to reduced agency costs and information asymmetries (Klein, 1998; Bhagat & Jefferis, 2002; Heenetigala & Armstrong, 2011), thereby enhancing shareholder value. Many empirical studies support the theoretical premises. For example, Nuryanah and Islam (2011) documented a significant positive effect of an independent audit committee on shareholder value, as measured by ROA and Tq. Equally, Al Mamun et al. (2014) and Yasser and Al Mamun (2015) documented a positive relationship between the independent audit committee and shareholder value, as measured by EVA.

Regarding the audit committee size, the BSEC (2012) set a code that the audit committee for the Bangladeshi corporate sector shall comprise three members, including at least one non-executive director and two independent non-executive directors, of whom one shall become Chairman of the committee. There are theoretical and empirical arguments that audit committee size is a matter of shareholder value. The resource dependency theory contends that a larger audit committee offers diversified skills and knowledge, enabling them to exploit their experience and expertise to ensure an effective internal control system, leading to enhanced shareholder value. Several empirical studies (e.g. Al Mamun et al., 2014; Yasser & Al Mamun, 2015) concluded that a larger audit committee positively contributes to shareholder value, as measured by EVA. Simultaneously, Swamy (2011) and Al-Matari et al. (2012) documented a positive effect of audit committee size on ROE and Tq.

As for the frequency of audit committee meetings, the BSEC (2012) recommends that the Bangladeshi corporate sector hold at least four meetings in a financial year. Hypothetically, the frequency of audit committee meetings gauges the intensity of the committee's activities. It has been argued that regular audit committee meetings allow members to monitor the internal control systems, compliance with laws and regulations, the financial reporting process, and the audit process effectively. It informs directors and helps them address critical problems with these issues. Therefore, a higher frequency of audit committee meetings results in the maximisation of shareholder value. Empirically, Al Mamun et al. (2014) argued for a high frequency of audit committee meetings to enhance shareholder value, as measured by EVA. Again, Kyereboah-Coleman (2007) and Al Farooque et al. (2019) also provided evidence of a positive effect of audit committee meetings on shareholder value, measured by return on stock and Tq. Therefore, considering the theoretical expectations and varied empirical evidence, the third, fourth, and fifth relevant hypotheses being tested in this study are:

*H<sub>3</sub>: Independent audit committees act as a positive driver of shareholder value, as measured by EVA, ROE, and Tq.*

*H<sub>4</sub>: Audit committee size acts as a positive driver of shareholder value, as measured by EVA, ROE, and Tq.*

*H<sub>5</sub>: Audit committee meetings acts as a positive driver of shareholder value, as measured by EVA, ROE, and Tq.*

#### **2.4. Institutional Shareholding and Shareholder Value**

According to agency theory, institutional investors can reduce agency costs by holding a significant number of equity shares, thereby maximising shareholder value. The underlying argument is that institutional investors perform a surveillance role (Jensen, 1986). Consequently, they may reject counterproductive strategies while supporting more productive ones (Bethel & Liebeskind, 1993). Hence, a positive relationship is expected between institutional shareholding and shareholder value. Financial theory shares the common premise of agency theory: institutional ownership can enhance the managerial monitoring role from a corporate governance perspective and thus help in strategic decision-making, which adds shareholder value (Tsai & Gu, 2007). Empirically, Arezumandi and Pourparvin (2016) and Yasser et al. (2017) found a positive association between institutional ownership and shareholder value measured by EVA. They argued that institutional investors enjoy greater incentives and efficiencies, which mitigate the asymmetric information dilemma and associated agency problems, hence creating shareholder value. Additionally, institutional investors may use this to communicate information to different investors in line with the philosophy of signalling theory (Gillan & Starks, 2002). Therefore, the sixth hypothesis being tested in this study is:

*H<sub>6</sub>: Institutional shareholding act as a positive driver of shareholder value, as measured by EVA, ROE, and Tq.*

### 3. METHODOLOGY

#### 3.1. Sample and Data

The sample in this study included 29 out of 30 commercial banks listed on the Dhaka Stock Exchange in Bangladesh. One of the listed banks was omitted from the sample for having a negative equity value over the entire study period. The final sample size comprised 1 state-owned and 28 private commercial banks, of which 22 were traditional, and 6 were Islamic commercial banks. This study covered 5 years, from 2014 to 2018. Therefore, the final data set consists of a balanced panel of 29 banks and 145 bank years. Data were gathered from various sections of the respective banks’ annual reports (e.g. shareholders’ information, compliance report on BSEC notification, directors’ profiles, and financial statements).

#### 3.2. Variable Description

Table 1 presents the list of dependent, independent, and control variables along with their measurement basis.

**Table 1:** Variables and Measurements

<b>Variables</b>	<b>Labels</b>	<b>Measurements</b>
<i>Dependent variables</i>		
Economic value added	EVA-Ln	Natural logarithm of net profit after tax plus the provision for loans and advances minus cost of shareholders’ equity in each financial year.
Return on equity	ROE	Net income (after preference stock dividends, but before common stock dividends) divided by the total equity excluding preference stocks.
Tobin’s Q	Tq	Total market value of a bank plus total debt divided by its book value of total assets.
<i>Independent variables</i>		
Board size	BdSize	Total number of directors serving on a bank’s board at the end of its financial year.
Independent non-executive directors	INEDs	Total number of independent non-executive directors serving on the board of a bank at the end of its financial year.
Independent audit committee	ExaudC	A dummy variable that takes a value of "1" if the audit committee comprises one non-executive director and two independent non-executive directors, of whom one is the Chairman of the committee at the end of a bank’s financial year, and zero (0) otherwise.
Audit committee size	SizeaudC	The number of audit committee members serving on a bank’s audit committee at the end of its financial year.
Audit committee meetings	AudcM	Total number of meetings held by the audit committee of a bank in each financial year.
Institutional shareholding	InstSh	The proportion of ordinary shares held by institutional investors at the end of the financial year.
<i>Control variables</i>		

Asset tangibility	Asttang	Total tangible assets of a bank are divided by its book value of total assets.
Debt-equity ratio	Gear- <i>Ln</i>	Natural logarithm of total debt of a bank divided by its total shareholders' equity.
Bank size	BkSize- <i>Ln</i>	Natural logarithm of total assets of a bank
Bank age	BkAge	The number of years a bank has been listed on the Dhaka Stock Exchange.
Bank type	Bktype	A dummy variable takes the value of 1 if the bank is a traditional commercial bank and 0 if it is an Islamic commercial bank.

### **3.2.1. Dependent Variables**

The dependent variable, shareholder value (SV), refers to the value added to stockholders' investments as a result of a company's success. This study quantified SV from three perspectives: (i) economic profit, as measured by the natural logarithm of economic value added (EVA-*Ln*); (ii) accounting return, as measured by return on equity (ROE); and (iii) market return, as measured by Tobin's Q. (Tq).

### **3.2.2. Independent Variables**

Corporate governance mechanisms (CGMs) are independent variables that control and direct banks to reduce inefficiencies caused by moral hazards and adverse selection (Aboagye & Otieku, 2010). Board size, independent non-executive directors, independent audit committee, audit committee size, audit committee meetings, and institutional shareholding are all examined in this study.

### **3.2.3. Control Variables**

This study also controlled seven standard variables other than CGMs that influence SV. They are: asset tangibility, debt-equity ratio, bank size, bank age, and bank type.

### **3.3. Model Specification**

This study employed a random-effects panel data regression model to examine whether CGMs act as SV drivers in listed banks in Bangladesh. The preference for the random-effects model over the pooled ordinary least squares and the fixed-effects models was due to the estimations of the F-test and B-P LM test for all panel data regression models were significant, and the estimations of the Hausman specification test for all panel data regression models were found to be insignificant, as reported in Table 2. The table further shows that estimations for the Breusch-Pagan/Cook-Weisberg test of the panel data regression models were insignificant, indicating heteroscedasticity is likely not a problem in all models. The estimation for the Wooldridge test of model 2 was significant, indicating that model 2 is affected by autocorrelation.

**Table 2:** Estimations for Tests of the Appropriate Model Selection

Types of Tests	Model 1 (Dep. Var: EVA-Ln)	Model 2 (Dep. Var: ROE)	Model 3 (Dep. Var: Tq)
<i>F</i> -test	6.33***	1.65**	2.67***
B-P LM test ( $\chi^2$ )	77.15***	35.08**	54.06***
Hausman test ( $\chi^2$ )	9.67	17.43	17.09
Breusch-Pagan/Cook-Weisberg test ( $\chi^2$ )	0.03	0.29	2.75
Wooldridge test	0.967	19.285***	2.375

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

(ii) *F*-test refers to the *F*-test in a fixed-effects model.

(iii) The B-P LM test ( $\chi^2$ ) refers to Breusch and Pagan’s Lagrange Multiplier test.

(iv) The Hausman test ( $\chi^2$ ) refers to the Hausman specification test.

Therefore, to deal with the autocorrelation problem with model 2, this study employed the random-effects GLS regression model with an AR (1) disturbance. This study employed the following three random-effects regression models of analysis to test hypotheses based on the test results.

**Model 1:**

$$EVA-Ln_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 INEDS_{it} + \beta_3 ExaudC_{it} + \beta_4 SizeaudC_{it} + \beta_5 AudcM_{it} + \beta_6 InstSh_{it} + \beta_7 Asttang_{it} + \beta_8 Gear-Ln_{it} + \beta_9 BkSize-Ln_{it} + \beta_{10} BkAge_{it} + \beta_{11} Bktype + \beta_{12} Year\ dummies + u_i + v_{it}$$

**Model 2:**

$$ROE_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 INEDS_{it} + \beta_3 ExaudC_{it} + \beta_4 SizeaudC_{it} + \beta_5 AudcM_{it} + \beta_6 InstSh_{it} + \beta_7 Asttang_{it} + \beta_8 Gear-Ln_{it} + \beta_9 BkSize-Ln_{it} + \beta_{10} BkAge_{it} + \beta_{11} Bktype + \beta_{12} Year\ dummies + u_i + v_{it}$$

**Model 3:**

$$Tq_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 INEDS_{it} + \beta_3 ExaudC_{it} + \beta_4 SizeaudC_{it} + \beta_5 AudcM_{it} + \beta_6 InstSh_{it} + \beta_7 Asttang_{it} + \beta_8 Gear-Ln_{it} + \beta_9 BkSize-Ln_{it} + \beta_{10} BkAge_{it} + \beta_{11} Bktype + \beta_{12} Year\ dummies + u_i + v_{it}$$

Where  $\alpha$  denotes the constant term,  $\beta_1:\beta_{12}$  refers to parameters for the independent variables, subscripts (*i*) and (*t*) refer to the number of banks and periods, respectively,  $u_i$  denotes unobservable individual-specific effects, and  $v_{it}$  refers to the remainder disturbance.

**4. RESULTS AND DISCUSSION**

**4.1. Outlier Checking and Results of Normality Test**

Outliers were found in EVA, ROE, Tq, AudcM, InstSh, Gear, BkSize, and BkAge, among other variables. These variables were winsorised at 5% and 95%, followed by Hossain (2020), to reduce the impact of outliers. Data on the variables EVA, Gear, and BkSize deviated significantly from a normal distribution in their original form, as revealed by the Shapiro-Wilk-W test. Therefore, they were transformed into the natural logarithm (*Ln*) form and normalised.

## 4.2. Descriptive Statistics

Table 3 summarises the descriptive statistics. The average economic added value was 7.85, and its standard deviation was 6.81. The return on equity and Tobin's Q had mean values of 12.78 percent and 1.002 with standard deviations of 4.58 and 0.06, respectively. The average board size was 13.46 members, with independent non-executive directors accounting for 15 percent of boards and average CEO compensation of BDT 10.78 million. The audit committee size and the audit committee meetings had a mean value of 4.26 and 9.97, respectively. The average institutional shareholding was 15.47 percent. For the control variables, the mean of tangible assets was 0.0209, leverage (natural log) was 2.41, and bank size (natural log) was 12.03. The average bank age and revenue growths were 17 and 11%, respectively.

**Table 3:** Summary of Descriptive Statistics for Variables

Variables	No. of Obs.	Mean	Std. Dev.	Min	Max
Economic value added (EVA- <i>Ln</i> )	145	7.85	6.81	7.06	8.44
Return on equity (ROE) %	145	12.78	4.58	2.53	24.78
Tobin's Q (Tq)	145	1.002	0.06	0.88	1.14
Board size (BdSize)	145	13.50	3.67	6.00	23.00
Independent non-executive directors (INEDs) %	145	15.00	9.11	0.00	37.00
Audit committee size (SizeaudC)	145	4.26	0.89	3.00	7.00
Audit committee meetings (AudeM), times	145	9.97	5.92	3.00	25.00
Institutional shareholding (InstSh) %	145	15.47	9.22	0.00	34.90
Asset tangibility (Astattang)	145	0.021	0.01	0.003	0.052
Debt-equity ratio (Gear- <i>Ln</i> )	145	2.41	1.03	1.70	2.86
Bank size (BkSize- <i>Ln</i> )	145	12.03	11.00	11.12	12.61
Bank age (BkAge) year	145	17.00	6.50	6.00	32.00

Table 4 shows that firm size and growth have a significant positive low degree of correlation with EVA-*Ln*, ROE, and Tq based on correlation coefficients. Audit committee meetings and institutional shareholding have a significant negative correlation with ROE, whereas asset tangibility is significantly positive. Firm age has a significantly negative low degree of correlation with Tq, while independent non-executive directors and audit committee size are significantly positive. The correlation coefficients (positive/negative) across the variables are less than 0.641 in the matrix, indicating no severe multicollinearity problem. Table 4 also shows that the variance inflation factor (VIF) and tolerance statistics (TOL) have the highest values of 3.24 and 0.847, respectively, confirming that the dataset is free of multicollinearity.

## 4.3. Regression Results

Table 5 reports the regression results for whether corporate governance mechanisms adopted in the banking sector in Bangladesh act as the drivers of shareholder value as measured from the economic profit, accounting, and market perspectives, as proxied by EVA-*Ln*, ROE, and Tq, respectively. Model 1 documents a statistically insignificant relationship between BdSize and EVA-*Ln*. Models 2 and 3 also validate the statistically insignificant effect of BdSize on ROE and Tq. Therefore, all these findings reject  $H_1$ . The regression results suggest that board size does not act as a driver of shareholder value as measured from any perspective under the analysis. The study documents a statistically insignificant effect of INEDs on EVA-*Ln* and ROE, as reported in models 1 and 2. These results, thus, reject  $H_2$ . The results support the notion that independent

non-executive directors do not act as a driving force for shareholder value, as measured from the perspective of economic profit and accounting return. As with Weir et al. (2002) and Sobhan (2014), model 3 shows a statistically significant positive effect of INEDs on Tq at  $p < 0.01$ , supporting  $H_2$ . This result suggests that independent non-executive directors act as a driver of shareholder value as measured from the market return perspective. Consistent with Al Mamun et al. (2014) and Yasser and Al Mamun (2015), this study provides credible evidence that there is a statistically significant effect of ExaudC on EVA-Ln at  $p < 0.01$ . This finding, thus, fails to reject  $H_3$ . This result suggests that the presence of an independent audit committee acts as a driver of shareholder value as measured from the economic profit perspective. Models 2 and 3, however, show a statistically insignificant effect of INED on ROE and Tq, suggesting that independent non-executive directors do not act as a driver of shareholder value as measured from the accounting return and market perspectives. These results, thus, reject  $H_3$ .

Table 4: Pearson Correlation Matrix

Variables	EVA-Ln	ROE	Tq	BdSize	INEDs	SizeaudC	AudcM	InstSh	Astfang	Gear-Ln	BkSize-Ln	BkAge
EVA-Ln	1											
ROE	0.369***	1										
Tq	0.165*	0.368***	1									
BdSize	0.110	0.053	-0.095	1								
INEDs	-0.019	-0.119	0.176**	-0.303***	1							
SizeaudC	0.021	0.020	0.253***	0.368***	-0.067	1						
AudcM	0.028	-0.209**	-0.128	0.229**	0.063	0.088	1					
InstSh	-0.142	-0.230***	-0.086	-0.052	0.163*	0.364***	0.001	1				
Astfang	0.140	0.184**	0.076	0.113	0.030	0.169*	0.164*	0.073	1			
Gear-Ln	0.012	-0.135	0.098	-0.310***	0.199**	-0.284***	-0.113	-0.031	-0.094	1		
BkSize-Ln	0.332***	0.177**	0.296***	0.099	0.322***	0.084	0.206**	0.147*	0.089	-0.151*	1	
BkAge	-0.061	0.108	-0.184**	0.013	0.089	0.253***	0.116	0.224***	0.198**	-0.309***	0.473***	1
VIF				1.93	2.10	1.62	1.31	1.88	1.18	1.77	1.77	2.39
TOL				0.518	0.476	0.618	0.762	0.531	0.847	0.566	0.566	0.418

Notes: \*\*\*, \*\*, and \* indicate a correlation is significant at 1%, 5%, and 10% levels, respectively.

**Table 5:** Random-Effects Regression Estimations: CGMs as the Drivers of SV

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
	<b>Dependent variable:</b>	<b>Dependent variable:</b>	<b>Dependent variable:</b>
	<b>EVA-Ln</b>	<b>ROE</b>	<b>Tq</b>
Wald chi <sup>2</sup>	49.45	119.70	173.28
Prob > chi <sup>2</sup>	0.0003	0.0000	0.0000
R <sup>2</sup> (within/between/overall)	0.326/0.325/0.34	0.469/0.581/0.522	0.637/0.285/0.448
No. of observations	145	145	145
Board size (BdSize)	.0019(.0101)	.0527(.1085)	-.0007(.0014)
Independent non-executive directors (INEDs)	-.0003(.0039)	.0686(.0552)	.0011***(.0004)
Independent audit committee (ExaudC)	.1724**(.0735)	.5091(.8959)	.0373*(.0226)
Audit committee size (SizeaudC)	.0075(.0325)	1.0281***(.2796)	.0017*(.0011)
Audit committee meetings (AudcM)	.0072(.0449)	-1.4507***(.5161)	-.0072(.007)
Institutional shareholding (InstSh)	-.0018(.0046)	-.1517***(.0501)	-.0007*(.0003)
Asset tangibility (Asttang)	2.4784(3.8242)	80.3024**(39.1011)	1.0529**(5.291)
Debt-equity ratio (Gear-Ln)	.2941*(.1641)	-.4788(.3988)	.0008(.0202)
Bank size (BkSize-Ln)	.6042***(.1517)	1.8884(1.3081)	.0056(.0162)
Bank age (BkAge)	-.0057(.0098)	.0122(.0689)	-.0002(.0011)
Bank type (Bktype) year	.0144(.1236)	3.5656***(.10568)	.0115(.0118)
Period (Year dummies)	Yes	Yes	Yes

*Notes:* Coefficients are outside the parentheses, and standard errors are within the parentheses. \*\*\*, \*\*, and \* indicate p-value is significant at 1%, 5%, and 10% levels, respectively.

It is shown that SizeaudC is statistically insignificantly related to EVA-Ln, rejecting  $H_4$ . This result suggests that the audit committee size as a corporate governance mechanism does not contribute toward shareholder value measured from the economic profit perspective. Along the lines of Swamy (2011) and Al-Matari et al. (2012), Models 2 and 3, however, reveal contrasting results with that of EVA-Ln in that there is a statistically significant positive effect of the audit committee size on ROE and Tq at  $p < 0.01$  and  $p < 0.10$ , respectively, failing to reject  $H_4$ . The results suggest that the audit committee size acts as a value-driving force for shareholder value as measured from the accounting return and market return perspectives. Again, a statistically insignificant effect of AudcM on EVA-Ln and Tq is reported in models 1 and 3. Therefore, these findings reject  $H_5$ . This result implies that audit committee meetings held by the sampled banks in Bangladesh are not a value-driving governance mechanism for shareholder value as measured from the economic profit and market return perspectives. However, Model 2 in Table 5 reports a statistically significant negative effect of audit committee meetings on ROE at  $p < 0.01$ , rejecting  $H_5$ . This result suggests that audit committee meetings are a destructive governance mechanism for shareholder value as measured from the accounting return perspective. The study reveals that InstSh is statistically insignificantly related to EVA-Ln, as reported in model 1. This finding, therefore, rejects  $H_6$ . This result suggests that institutional shareholders in the banking sector in Bangladesh do not act as the driving force for enhancing shareholder value as measured from the economic profit perspective. However, model 2 and 3 reports provide evidence of a statistically significant negative effect of InstSh on ROE and Tq at  $p < 0.01$  and  $p < 0.10$ , respectively. These results, therefore, also reject  $H_6$  and contradict that of model 1.

As for the control variables and shareholder value, BkAge is statistically insignificantly related to EVA-Ln, ROE, and Tq. Gear-Ln is statistically positively related to EVA-Ln at  $p < 0.10$ . However, this result contrasts with the statistically insignificant effect of Gear-Ln on ROE and

Tq. BkSize-Ln is positively and statistically significantly associated with EVA-Ln at  $p < 0.01$ . This result, however, goes against the statistically insignificant effect of BkSize-Ln on ROE and Tq. The study reveals that Astattang is statistically insignificantly related to EVA-Ln. This result conflicts with the statistically significant positive relationship at  $p < 0.05$  between Astattang and shareholder value, as proxied by ROE and Tq. Finally, Bktype has a statistically insignificant impact on EVA-Ln. This result supports the insignificant relationship between Bktype and ROE. However, it goes against the significant positive relationship at  $p < 0.01$  between Bktype and Tq.

#### 4.4. Sensitivity and Robustness Check

The sensitivity of the main results to the alternative measurement of the bank size variable — initially operationalised by the natural logarithm of total assets (BkSize-Ln) — was checked. Bank size was replaced with the natural logarithm of total annual revenue (BkSize-Ln\_A) earned by each sampled bank during a financial year, and all the regressions were re-run. The results presented in Table 6 are similar to the main results except for changes in the level of significance of a few variables (e.g. Gear-Ln in model 1; BkSize-Ln\_A, SizeaudC, and Astattang in model 2; and INEDs in model 3).

**Table 6:** Random-Effects Regression Estimations: CGMs as the Drivers of SV after Alternative Measurement of Bank Size

	Model 1 Dependent variable: EVA-Ln	Model 2 Dependent variable: ROE	Model 3 Dependent variable: Tq
Wald chi <sup>2</sup>	59.51	135.81	183.96
Prob > chi <sup>2</sup>	0.0003	0.0000	0.0000
R <sup>2</sup> (within/between/overall)	0.3475/0.3094/0.338	0.5040/0.6226/0.555	0.6475/0.3446/0.487
No. of observations	145	145	145
BdSize	.0023(.0104)	.0827(.1121)	-.001(.002)
INEDs	-.0019(.0038)	.0208(.0532)	.002*(.001)
ExaudC	.1742**(.0679)	1.0714(1.0746)	.0361*(.0201)
SizeaudC	.0142(.0312)	.1206**(.0501)	.0017*(.001)
AudcM	.0027(.0438)	-1.6677***(.5338)	-.0142(.0107)
InstSh	-.0014(.0052)	-.1448***(.0457)	-.0015*(.0009)
Astattang	.7907(3.7632)	60.4532*(35.7526)	2.0810**(.8509)
Gear-Ln	.4317***(.1638)	1.7681(2.211)	.0182(.0396)
BkSize-Ln_A	81.1036*** (19.2339)	2.6727*** (1.0340)	1.03e-07 (1.64e-07)
BkAge	-.0103(.0115)	-.6006(1.3647)	-.0043(.0264)
Bktype	.1003(.1542)	3.4366***(.9493)	.0224(.0195)
Year dummies	Yes	Yes	Yes

*Notes:* Coefficients are outside the parentheses, and standard errors are within the parentheses. \*\*\*, \*\*, and \* indicate p-value is significant at 1%, 5%, and 10% levels, respectively.

The original results were also confirmed using an alternative regression model, namely the feasible generalized least squares (FGLS) regression model at the point of heteroskedasticity and AR(1) autocorrelation within panels, to ensure their robustness. Except for changes in the level of significance of a few variables (e.g. ExaudC and Gear-Ln in model 1; and INEDs, Astattang, and InstSh in model 3), the results reported in Table 7 are consistent with the original. Overall, the findings are consistent with the main findings.

**Table 7: FGLS Regression Estimations: CGMs as the Drivers of SV**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
	<b>Dependent variable: EVA-Ln</b>	<b>Dependent variable: ROE</b>	<b>Dependent variable: Tq</b>
Wald chi <sup>2</sup>	77.82	149.60	160.23
Prob > chi <sup>2</sup>	0.0000	0.0000	0.0000
No. of observations	145	145	145
BdSize	.001(.009)	.0298(.1031)	-.0008(.0021)
INEDs	-.0006(.004)	.0403(.0522)	.002**(.0009)
ExaudC	.1478*(.0872)	.6108(.9995)	.0362*(.0209)
SizeaudC	.0426(.0343)	1.0244***(.3891)	.0159*(.0081)
AudcM	.0259(.0422)	-1.5086***(.4785)	.0143(.01)
InstSh	-.0049(.0034)	-1.1651***(.0387)	-.0015***(.0005)
Asttang	3.5423(3.302)	90.3046**(37.2114)	2.1621*(.7784)
Gear-Ln	.4698***(.1549)	-1.0337(1.7711)	.0118(.037)
BkSize-Ln	.6231***(.1067)	1.5595(1.1852)	.009(.0247)
BkAge	-.0165(.1095)	.0112(.0685)	-.0005(.0014)
Bktype	.0777(.075)	3.5623***(.8554)	.0246(.0178)
Year dummies	Yes	Yes	Yes

*Notes:* Coefficients are outside the parentheses, and standard errors are within the parentheses. \*\*\*, \*\*, and \* indicate p-value is significant at 1%, 5%, and 10% levels, respectively.

#### 4.5. Discussion

The discussion is based primarily on the findings of model 1, which examines whether CGMs in the analysis act as SV drivers as measured from the economic profit perspective. The results of models 2 and 3, which examine whether CGMs are the drivers of SV from both an accounting and a market return perspective, are used for comparison and to show how these two perspectives can be misleading and even questionable.

Relying on baseline model 1, this study shows that only one corporate governance mechanism, namely the presence of an independent audit committee, acts as a true driver of creating shareholder value, as measured from the economic profit perspective. The positive result supports Klein’s (1998), Bhagat and Jefferis’s (2002), and Heenetigala and Armstrong’s (2011) arguments that an independent audit committee aids in disseminating timely, impartial accounting information to shareholders, resulting in lower agency costs and information asymmetry, and thus creating shareholder value. All other five corporate governance mechanisms examined, such as board size, independent non-executive directors, institutional shareholders, audit committee size, and audit committee meetings, do not act as drivers for increasing true shareholder value, as measured by economic profit, in Bangladesh’s banking sector.

The insignificant impact of board size on true shareholder value is inconsistent with resource dependency theory. One reason could be that the board members lacked broad exposure to the external business environment, making them unable to bring diverse knowledge and skills and establish business contacts from various backgrounds. The independent non-executive directors’ result could be explained by the fact that they were chosen from individuals with social or family ties to the controlling shareholder group. Consequently, they likely played a dormant role in the boardroom and refrained from making independent decisions. The result on the audit committee size contradicts the resource dependency theory. One reason could be that audit committee

members lacked the range of skills and knowledge required to apply their knowledge to generate shareholder value effectively. A plausible explanation for the audit committee meetings not acting as a driving force is that they were most likely held to meet regulatory requirements, implying that they had nothing to do with the effective supervision and support of the directors in resolving problems involving internal control systems, compliance with laws and regulations, financial reporting, and auditing. It may be that the controlling shareholder group hired them to play a subservient role to them.

In contrast, for CGMs and shareholder value measured from the accounting return perspective, the audit committee size is found to have acted as the driver of shareholder value, while audit committee meetings and institutional shareholding as corporate governance mechanisms are found to have a detrimental effect on shareholder value. Considering shareholder value measured from the market return perspective, this study finds that independent non-executive directors, an independent audit committee, and the audit committee size act as the value-driving forces, while institutional shareholding act as a value destructive force. Since shareholder value measured from the accounting return and market return perspectives, as proxied by ROE and Tq, respectively, do not or poorly reflect true shareholder value because of their many inherent flaws. Therefore, the relationship between CGMs and SV measured from the accounting return and market return perspectives are questionable and may be misleading. The results obtained from the sensitivity and robustness tests are consistent with the main results.

## 5. CONCLUSION

This study attempts to examine whether corporate governance mechanisms (CGMs) adopted in the banking sector in Bangladesh act as the drivers of shareholder value (SV) from the economic profit perspective, as proxied by EVA-Ln. This study finds that only the presence of the independent audit committee acts as a driver of creating true shareholder value, as measured from the economic profit perspective. The remaining CGMs being studied (e.g. board size, independent non-executive directors, the audit committee size, audit committee meetings, and institutional shareholding) are found not to have acted truly as the drivers of shareholder value, as measured from the same perspective.

The findings of this study have important policy implications for regulatory bodies and institutions involved in developing CGMs and for bank management and shareholders in understanding the true CGMs-SV relationship in the context of the banking sector in Bangladesh. The results suggest new patterns in the explanatory power of CGMs on SV from the economic profit perspective in listed banks in Bangladesh. It is evident from the findings that most of the existing CGMs in the analysis are suboptimal in the sense that they do not act as value-driving mechanisms for shareholder value maximisation. Also, they are weak and inadequate in holding bank management accountable for their stewardship. Therefore, regulatory bodies and institutions engaged with developing CGMs for the banking sector in Bangladesh (e.g. Bangladesh Enterprise Institute (BEI), Bangladesh Securities and Exchange Commission (BSEC)) require modification of the existing governance mechanisms to make them suitable for creating shareholder value.

However, the study has several limitations that create opportunities for future studies. First, the study revealed a partial impact of CGMs on shareholder value in terms of the effect on time span. This is because the study examined only five years of panel data from 2014–2018, though CGMs for Bangladesh were introduced almost one and a half decades ago. Second, data were collected from the annual reports of the respective banks. The reports were audited by the local audit firms, except for a few banks that employed one of the Big 4 audit firms, whose precision and trustworthiness were not beyond question. Finally, the findings of this study are limited to the effect on the shareholder value of six CGMs employed in the banking sector in Bangladesh. Therefore, future studies may be conducted by including more CGMs employed in all corporate sectors in Bangladesh for the whole period since launching the code of corporate governance for Bangladesh and collecting data from other reliable sources.

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