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The Financial Impact of CSR Reporting on Emerging Market Banks: An Empirical Investigation

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Abstract

Banks play a vital role in sustaining a healthy economy, and corporate social responsibility (CSR) initiatives provide them with legitimacy and a competitive advantage. This study investigates the extent of CSR disclosure and its influence on the financial performance of Bangladeshi banks. Secondary data were collected from the annual reports of ten listed banks in Bangladesh over seven years (2017–2023) using a stratified random sampling approach. The analysis employed content analysis, ANOVA, and panel regression models, incorporating control variables such as firm age, firm size, independent directors, leverage, and asset tangibility. Findings reveal that banks disclose, on average, 28.90% of CSR-related information, while neglecting aspects such as product responsibility and minority issues. Among the disclosed dimensions, contribution to the national exchequer ranks highest, followed by education, community development, and disaster management. CSR disclosure has shown a steady upward trend during the study period. Regression results demonstrate that CSR reporting significantly and positively affects financial performance, suggesting that greater CSR engagement is associated with higher profitability. Furthermore, leverage and tangibility positively influence bank performance, while firm age, size, and independent directors show no significant effect. Overall, the results highlight that robust CSR practices not only boost banks' profitability but also reinforce their legitimacy and competitiveness. Policymakers should therefore promote standardized CSR reporting, and banks should expand their disclosure to overlooked areas such as product responsibility and minority inclusion to foster sustainable growth.

Keywords: Banking Companies; CSR Reporting; Leverage; Return on Assets; Return on Equity; Tangibility.

1. Introduction

The conventional form of corporate exposure or reporting takes a contracted and narrow viewof evaluating an organization's financial performance and position (Radwan et al, 2025; Giannopoulos, Pilcher, & Salmon, 2024; Barker, 2004; Perrini, F., & Tencati, A., 2006). It excludes different types of information about the future overall impact of business concerns activities, such as, rise of sea level, destruction of the ozone layer, increase of drought, flood, diseases, social cost of involuntary unemployment, etc (Byravan & Rajan, 2010). Economists consider these impacts as externalities - the penalty of economic activities which are not reflected in the costs borne by the business organization enjoying the profit of the action (Gray, 1996). Due to the different changes in society, more transparency and accountability are demanded at present in corporate reporting. Consequently, corporate social responsibility reporting may be considered unavoidable and inevitable to fulfill these demands (Puspitasari, Harymawan, & Aziz,2024). The rapid increase in CSR reporting by business institutions signals the importance of CSR activities for sustainable development (KPMG, 2008), and corporations that are involved in CSR activities will get a chance to achieve competitive benefits (Mikial et al., 2022), derive motivation, develop financial performance (Uyar et al., 2024), and build real outcomes (KPMG, 2017). CSR reporting plays a crucial role in enhancing a company's financial success by demonstrating accountability and commitment to stakeholders, which can lead to improved corporate performance (Roy, 2024; Lee and Maxfield, 2015). But a limited number of corporations engage in social and environmental reporting in Southeast Asian countries like India, China, Pakistan, and Bangladesh. Consequently, the extent of disclosure of CSR is less, and the quality of disclosure is very poor (Belal, 2001; Azim et al., 2017). The Bangladesh Companies Act, 1994, sets the general provision for corporate financial reporting. Surprisingly, there are no provisions regarding CSR reporting in the Companies Act 1994 (GoB, 1994). Even though no provisions concerning social and environmental reporting exist in Bangladesh Accounting Standard (BAS), according to the International Accounting Standard Committee Foundation (IASCF). If management wants, the listed companies can facilitatethe users making economic decisions by circulating additional statements or reports, or schedules on their non-financial activities (Hamad & Osman, 2025). Therefore, CSR reporting still depends on the intention of management of financial companies, except for expenses on energy (Belal, 2001). There are several research works on the level of CSR disclosure of companies using various themes, countries, or markets (Gidage et al., 2025; Deegan &



Gordon, 1996; Mathews, 1997; Belal, 2001; Deegan, 2002). Few studies have examined the relationship between CSR disclosure and financial performance (Olawale et al., 2025; Sulbahri et al., 2022; Azim et al., 2017; Das et al., 2021). However, the findings of this research often imply contradictory and mixed results. For example, Khan and Hassan (2019) have seen that there has been no important nexus between CSR and corporate financial performance (CFP). CSR isessential in achieving sound financial performance of business organizations in Bangladesh (Mahbuba & Farzana, 2019). Corporate social activities and corporate profitability have a statistically significant positive correlation, which implies the view that CSR activities have an influence on the bottom line (Buallay et al., 2024; Palmer, 2018; Das, Dixon, and Michael, 2021). Theoretical foundation indicates both a potentially positive or negative connection between CSR disclosure and corporate financial performance (Ali, 2025; Yusoff, H., Mohamad, S. S., & Darus, F., 2013). As a result, the question regarding the proper direction of the relationship between CSR disclosure and financial performance is still unresolved. To make this issue clear, the structure of this paper proceeds as follows: Section 2 provides a literature review and theoretical perspective of CSR, Section 3 states the objectivesof the study, Section 4 explains the methodological aspects of the study, Section 5 presents analysis and discussion of the results, and Section 6 relates to the conclusion part of the study.

2. Literature Review and Hypotheses Development

CSR reporting plays a crucial role in enhancing a company's financial success by demonstrating accountability and commitment to stakeholders, which can lead to improved corporate performance (Hamdy et al., 2024). Several studies focus on different theories in the literature that strive to clarify social accounting or CSR disclosure (Hossain, Dey & Sil, 2018; Hossain & Neogy, 2019; Jitaree, 2021) and the relation between CSR reporting and profitability. But the broader theoretical and contextual scenery of CSR disclosure is totally dissimilar in Bangladesh from those in developed economies like the U.S.A., Canada, or Australia because CSR disclosure is not compulsory for every business concern in Bangladesh. Among the developing countries, Bangladesh fascinates a substantial amount of study in social accounting or social reporting, or CSRD (Belal, 2001). To achieve an extensive understanding of the outcomes of past research on practices of social disclosure of businesses, a short review of significant research is now drawn.

2.1. Corporate social responsibility (CSR) and corporate social responsibility reporting (CSRR)

According to the classical view, a business concern or company should be accountable to its owners or shareholders only. All activities of a corporation should focus on the attainment of the maximum value of the company. And the agents of the business, especially managers, do not have any right to be involved in socially responsible programs that may decrease the revenues of the entity (Friedman, 1962). Again, it was thought that any expenditure made on social well-being aspects is a violation of management's responsibility to shareholders on the grounds that such activities lead to lower shareholders' wealth and weaken competitive intensity (Post et al., 1999). In their discussion of CSR practices in big firms and small and medium enterprises (SMEs), Russo and Perini (2009) claim that earnings can no longer be the corporations" only objective; their achievement is also based on their stakeholder relationships, which cover many things (Garriga & Mele', 2004), and business enterprise should be responsible to various stakeholders to ensure long-term benefits by their current operations and creation of positive values of company. At present, the most approved and extensively acknowledged concepts in the business world are CSR (Carroll & Shabana, 2010). However, the idea of CSR is still in its infancy. It is considered an emerging and elusive concept for academicians and professionals. Moreover, it is a tough matter for business managers (O'Riordan & Fairbrass, 2008. CSR is a voluntary concept that involves companies integrating social and environmental concerns into their operations and dealings with stakeholders, according to the Commission of the European Communities (2001). In 1999, the World Business Council for Sustainable Development defined corporate social responsibility (CSR) as a company's pledge to support long-term economic growth by enhancing the quality of life for workers, their families, the local community, and society at large. Therefore, ethical principles, legal requirements, and consideration for people, societies, and the environment should be the foundation of business decisions (Business for Social Responsibility, 2001). It is also anticipated that open and transparent business practices that are founded on ethical principles and respect for workers, societies, and the environment will result in long-term business success. Recently, a lot of research has indicated that the overriding approach towards CSRD has completely altered. CSRD has been considered as a tool for communicating relevant information about societal and environmental issues to both inside and outside decision makers of an organization (Feneir, 2021). In other words, CSRD is an addition or extension of disclosure of non-traditional monetary and non-monetary information to the stakeholders of a business, such as disclosing information about the environment, human resources, goods, services, community services, customer demand fulfilment, etc. CSRD has been improved to expand the conventional framework of financial reporting, which emphasizes a corporation's financial richness to integrate social and environmental dimensions (Rehman et al., 2020). The sustainability reporting of companies has increased day by day, which signals that companies consider CSRD as part of their policy to create value by establishing trust among groups. CSR or CSRD definition should not be fixed over time; rather, CSR or CSRD definition can be changed or extended depending upon the requirements of time and circumstances (Ince, 1988). So, CSRD is an extensive and broad term.

2.2. Stakeholder theory and CSR reporting

In managing a corporation, the stakeholder theory directs confirming ethical aspects that are vital for stakeholders of an organization. This theory was first explained by R. Edward Freeman in the book, namely, Strategic Management: A Stakeholder Approach. He detects different types of stakeholders of a corporation, and suggests techniques by which management can provide appropriate interests to the stakeholders (Freeman, 1984). Thistheory originated in time to direct how actual corporations should run, by taking into consideration the impacts of stakeholders' desires that were not yet paid attention to properly in business practices (Mainades et al., 2017). According to Clarkson (1995), the primary stakeholders are those whose consistent participation in the company is essential to its survival and whose laws and regulations must be adhered to. Secondary stakeholders are those who have an impact or are affected by the business but are not involved in participation with organizations for their success. Even competitors of a business are also considered stakeholders. Stakeholder theory is the basis for the development of frameworks in corporate social responsibility framework methods, such as ISO 26000 and GRI (Global Reporting Initiatives) (Brown & Forster, 2018). Some stakeholder philosophers found that maintaining firm-specific stakeholder relationships is good (Margolis & Walsh, 2003). The result of a survey conducted by Epstein & Freedman in 1994 reveals that disclosure of the social agenda to external stakeholders is more important than disclosure of financial impact. To describe the patterns of CSR reporting, stakeholder theory is widely used. Community issues are focused on by many companies in their CSR activities, as the community is thought of as the most influential stakeholder (Hamid & Atan, 2017).

2.3. Legitimacy theory and CSR reporting

According to legitimacy theory, businesses aim to make sure that their operations are seen as consistent with the standards, beliefs, and expectations of the community in which they function (Suchman, 1995). According to this viewpoint, CSR reporting serves as a tactical instrument that companies use to try to preserve, protect, or regain their credibility. Businesses frequently boost the quantity or caliber of CSR disclosures in response to legitimate constraints, such as those brought on by stakeholder scrutiny, environmental concerns, or unfavorable media coverage, to show accountability and conform to social norms (Lindblom, 1994; Deegan, 2002). Because businesses rely on discretionary disclosure practices to signal responsible behavior, improve corporate image, and secure ongoing societal approval, legitimacy motives become even more prominent in many developing economies, like Bangladesh, where CSR reporting is primarily voluntary (Belal & Owen, 2007; Islam & Deegan, 2008). Therefore, legitimacy theory offers a solid theoretical foundation for elucidating variances and trends in CSR reporting, especially in situations where regulatory enforcement is lax and stakeholder expectations are elevated.

2.4. Variation of CSR reporting

Past research shows the trend as well as the quality of CSR reporting covering developed and developing economies (Aupperle et al., 1985). Using and examining KLD data, Waddock & Graves (1997) found that CSR results in an increase in the financial performance of companies. García-Benau et al. (2019) found that with the crisis, the number of companies reporting has increased, and a statistically significant difference between CSR adopters and CSR non-adopters in respect of ROE is seen. Menessa (2010) has examined the distinctiveness and characteristics of CSR reporting of the banking industry in Libya. The findingdemonstrated that product information, customer-related reporting, and employee-relateddisclosures were mostly disclosed by Lebanese banks, while the reporting on environmental aspects is very weak. There is also no major difference in CSR disclosure among listed banks, non-listed banks, and banks with overseas persons in Lebanon. Tsang (1998) revealed that the degree of CSR disclosure of three sectors, namely food, hotel, and Beverage, was increasing during the period of 1986 to 1995. Research results found by Teoh & Shiu (1988) are: (1) There is no difference in the impacts of financial information and financial plus general SRD information on investment decisions by institutional investors. (2) There is no difference in the perceived importance of (a) financial and non-financial forms of SRD and (b) quantitative and narrative forms of SRD by institutional investors in investment decision-making. (3) There is no difference in the perceived importance of different themes of SRD by institutional investors for investment decision-making, except product improvement theme. Variation in CSR reporting from (27.84 to 65.98) is remarkable, and regulatory changes impact the nature and degree of CSR disclosure (Ullah & Rahman, 2021). Even, industry to industry, the extent of CSR reporting is different (Giannakakos, 2019). Information relating to environmental recognition and waste management categories is are least disclosed, and information relating to renewable energy and green banking is the most disclosed. Moreover, it is revealed that in 2020, environmental disclosure increased suddenly from 16% to 83% (Masud, Bae, and Kim, 2019). Since there is no legal obligation for standardized CSR disclosure for all businesses outside of a few sector-specific standards (such as Bangladesh Bank directions for banks), CSR reporting in Bangladesh is still optional. As a result, businesses have a great deal of latitude in choosing how much, how deeply, and what kind of CSR information to reveal. Because it is voluntary, there is usually a great deal of diversity in reporting techniques. Instead of adhering to mandated regulatory standards, companies may strategically release CSR information to improve reputation, signal legitimacy, or respond to stakeholder pressures. Based on the above discussion, we assert that

H₁: There is a mean difference in CSR reporting between the sample banks of the study.

H₂: There is a mean difference in CSR reporting between the study periods.

2.5. CSR reporting and financial performance

In this part, a discussion on past literature has been made on the relation between CSR and the financial performance of banking companies in various countries of the world. The results of past research were mixed and contradictory in examining the relationship between CSR disclosure and profitability (Mikial et al., 2022; Aras et al., 2010; McWilliams & Siegel, 2000; Preston & O" Bammon, 1997; Hossain, 2019). A study conducted by Adam & Zutshi (2006) found that two crucial factors direct the companies to perform socially responsible activities—recognition of the power and business interest. Business interest is basically related to earning profit (Sulbahri et al., 2022). Ghoul, Guedhami, Kwok & Mishra (2017) have examined the consequence of CSR on the cost of capital for U.S. companies. The study found that companies with higher CSR scores direct lower equity financing. This finding indicates that CSR-adopting firms are less risky and of high value. However, the financial performance of Islamic banks does not have any influence on CSR reporting, while compliance with Sharia principles, the Sharia supervisory board has a significant impact on Islamic social reporting (Siswanti, 2018). Besides, Islamic banks are more committed to providing financial products or services, and less attention is given to environmental themes. The CSR index indicates that Islamic banks are involved in a broad variety of social activities, and a significant positive correlation exists between CSR and financialperformance (Hossain, 2019; Platnova et. al., 2018; Mallin et al., 2020). This relationship highlights the importance of transparency and strategic stakeholder engagement in driving financial outcomes. Moreover, understanding the specific industry context is essential, as the impact of CSR initiatives on financial performance can vary significantly across different sectors (Hamdy et al., 2024). Based on previous arguments, we hypothesize that

H₃: CSR reporting positively impacts financial performance.

3. Objectives of The Study

The general objective of the paper is to examine the CSR information disclosure status and its influence on the financial outcomes of commercial banks in Bangladesh. More specifically, the study attempts:

- 1) To examine the CSR information disclosure status of commercial banks in Bangladesh
- 2) To identify whether there is any significant variation in CSR information reporting among the commercial banks in Bangladesh.
- 3) To investigate the impact of CSR disclosure on the financial performance of commercial banks in Bangladesh

4. Methodology

In this section, the methodological issues are described, including research framework, sample construction, defining dependent and independent variables, sources of data, study period, regression models, etc.

4.1. Research framework

In Figure 1, the research framework illustrates where sixteen dimensions of CSR disclosure and two financial indicators, i.e., ROA and ROE, have been considered (See Figure 1).

4.2. Sample construction and choice of the study periods

A stratified random sampling technique was employed to select the sample units of theresearch work. Since the analysis is confined to publicly traded banks in the Dhaka Stock Exchange (DSE), all non-banking companies are excluded from the study initially, and the population size is reduced to 35. As our study considered data from 2017 to 2023, the population comes to 30, since in 2017 the DSE listed banks were 30. To represent the conventional and Islamic banks, six from conventional banks and four from Islamic banks were selected. So, the sample size of our study is 10 listed banks. The names of sample companies and their symbolic codes are provided in APPENDIX A. However, it can be concluded that the sample size and study period in prior studies in the Bangladeshi context are either minimal or incomplete. For example, Farzana and Mahbuba (2019) studied only one bank; Hasan (2019) studied only two years and six banks; Haq & Salam (2017) studied only four companies.

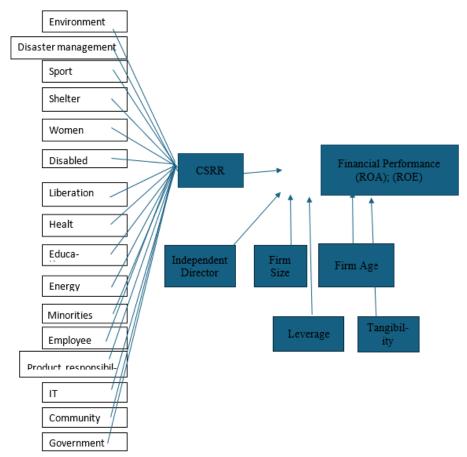


Fig. 1: Research Framework.

Source: Author's own creation.

4.3. Independent variable: CSR disclosure index

Content analysis has been extensively used in CSR literature to define the nature and pattern of CSR disclosure (Krippendroff, 2004; Gutheri & Abeysekera, 2006). A CSR checklist hasbeen developed to show a complete picture of CSR dimensions. After analyzing the information of annual reports regarding CSR dimensions, a total of eighty-five (85) items under sixteen (16) themes are incorporated in the desired checklist for attaining the objectivesof the study. Total number of disclosing items of the prepared checklist is 85 in which 15 items are relating to "Environment", 3 items relates to "Disaster management", 2 are relating to "Sports", 3 are relating to "Shelter", 6 are relating to "Women", 1 is relating to Disabled, 5 are relating to "Liberation war", 7 are relating to "Health", 11 are relating to "Education", 4 are relating to "Energy", 4 are relating to "Minorities", 14 are relating to "Employee", 1 is relating to "Product responsibility", 2 are relating to IT, 6 are relating to "Community" and 1 is relating to Government (tax). These dimensions of CSR reporting have been selected because they are regarded as vital for comprehensive corporate social responsibility reporting. The next step is computing the CSR index. Several techniques were adopted in prior studies, and an unweighted disclosure index approach (Haniffa & Cooke, 2002, 2005; Rouf, 2018) is used to calculate the extent of CSR reporting as a dichotomous variable in this research. If a bank reported CSR items in its annual report, it received a score of "1," while banks that did not received a "0." (Gujarati, 2009). Un-weighted index is calculated as follows:

$$CSRI = \frac{\sum_{i=1}^{n_j} x_{ij}}{n_j}$$
: Where

4.4. Control variables

Three control variables—company size, firm age, and independent directors, leverage, and tangibility—are considered in this study (Hossain & Saif, 2019). Firstly, one important issue that may affect a firm's operations and performance is its size. Prior research has shown a significant correlation between firm size and both financial performance and CSR disclosure (Patten, 1991; Gray, 1995; Deegan & Rankin, 1996; Wadock & Gravea, 1997). This suggests that larger firms may have more opportunities than smaller ones to engage in more environmentally and socially responsible practices. There are numerous ways to define firm size, and there is no compelling reason to select one over the other (s) (Cooke, 1991). Various size metrics, including total assets, turnover, paid-up capital, fixed assets, capital employed, shareholders' equity, number of employees, number of shareholders, etc., have been adopted by numerous investigators. In this study, total assets serve as a stand-in for business size. Secondly, another important aspect that may affect the amount of corporate social responsibility disclosure is the age of the business entity. The relationship between CSR and financial outcomes may be influenced by the company's age (Robert, 1992; Schreck, 2017; Peloza, 2006; Suttipan, 2018; Hossain, 2019). The works of Ehsan & Kaleem (2018; Mennessa, 2018), Sukcharoensin (2018) likewise show the opposite conclusion. According to certain surveys, younger companies place more emphasis on sustaining profitability than on CSR initiatives. Given the facts above, it can be said that the age of a firm may have an impact on the relationship between financial performance and CSR disclosure. For this reason, the age of the business is a control variable in this study. Thirdly, independent directors help a corporation raise its governance standards because they are not executives. A board with more independent directors tries to encourage managers to reveal more voluntary information, according to Wang et al. (2018) (Cheng et al., 2006; Arshad et al., 2010; Khan et al., 2019). Fourthly, empirical and theoretical literature shows a context-dependent relationship between leverage and profitability: moderate leverage can raise returns through tax shields and amplified equity returns (Mondal & Wadud, 2022), while excessive indebtedness increases interest burden and financial distress costs that depress profitability. Several recent studies focused on Bangladesh find mixed results—some show certain leverage measures improve firm or bank performance (Sarker, 2022; Ima et al, 2024) when accompanied by adequate capital buffers and good asset quality, while others report negative effects once leverage raises risk and non-performing loans. Local panel studies and sectoral analyses (e.g., Mondol; the comprehensive panel analyses of Bangladeshi banks; the 2024 leverage-profitability study; and Sarkar's NBFI work) document this heterogeneity and highlight that bank size, capital adequacy, asset quality, and macroeconomic conditions mediate the leverage-profitability link in Bangladesh. Finally, tangibility, defined as the ratio of fixed assets to total assets, has long been considered an important determinant of firm profitability. The trade-off theory suggests that higher tangibility enhances a firm's collateral value, facilitating access to external financing and potentially lowering the cost of capital (Frank & Goyal, 2009). However, overinvestment in fixed assets may reduce operational flexibility and slow responsiveness to market changes, thereby negatively affecting profitability (Titman & Wessels, 1988). Recent evidence highlights this duality: in emerging markets, tangibility shows mixed associations with profitability depending on firm size, industry type, and capital structure (Ima et al., 2024; IMF, 2019). In Bangladesh, sector-specific studies reveal that tangibility often exerts a negative or insignificant effect on financial performance, as seen in insurance companies where higher tangible assets reduce efficiency and profitability (Samina & Sagota, 2024; Lalon et al., 2021). Similar studies on banks confirm that profitability is more strongly influenced by capital adequacy, asset quality, and liquidity, with tangibility playing a limited or non-positive role (Mondol, 2021; Comprehensive Analysis of Bank Profitability in Bangladesh, 2021).

4.5. Dependent variables: bank's financial performance indicators

Numerous researchers employed accounting metrics such as price-earnings (P/E), operational income growth, sales growth, total assets, and earnings per share (EPS) (Bragdon & Marlin 1972). According to McGuire et al. (1988), accounting-based techniques are more effective than market-based indicators at forecasting CSR. However, Karagiorgos (2010) highlights that there is a positive and significant association between CSR and market-based indices. This study uses two accounting-based methods to investigate the link with CSR disclosure, considering the perspectives of various scholars. Return on Equity (ROE) and Return on Assets (ROA) are these ratios. First off, ROA is a key profitability metric used to evaluate how well a company's assets are doing. It implies how efficiently and effectively a business is receiving an earning advantage based on its assets. This ratio is widely and popularly used to compare banks' financial performance from year to year and bank to bank (Emilson, Classon, and Bredmar, 2018; Griffin and Mahon, 1997; McGuire et al., 1988). Secondly, ROE implies the rate of return that of company earns based on the shareholders' investment. Return on equitynegatively influences the CSR disclosure (Hidayate, W. W. 2017). These two indicators of financial performance are preferred in our study.

4.6. Regression models

Both ordinary least squares models and panel data models are considered in this study. In a panel data model, the behavior/ information of individuals or firms, or units, is measured across time (Baum, 2006). Gujrati (2009) emphasizes panel data models as they can identify and measure or analyze such types of information or data that cannot be detected in cross-sectional analysis. Depending upon the nature of the panel data, random effect models (RE) or fixed effect models (FE) are used in regression analysis. The Bruesch-pagan LM test and the Hausman test are employed to identify an appropriate model for data analysis. The following regression models are constructed:

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Model 1: Y(ROA_{jt}) = \beta_{0jt} + \beta_1 CSRR_{jt} + \beta_2 AGE_{jt} + \beta_3 IDDIRECTOR_{jt} + \beta_4 SIZE - TA_{jt} + \beta_5 Leverage_{jt} + \beta_6 Tangibility + \mathcal{E}_{jt};
Model 2: Y(ROE_{jt}) = \beta_{0jt} + \beta_1 CSRR_{jt} + \beta_2 AGE_{jt} + \beta_3 IDDIRECTOR_{jt} + \beta_4 SIZE - TA_{jt} + \beta_5 Leverage_{jt} + \beta_6 Tangibility + \mathcal{E}_{jt};
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4.7. Data sources and tools of analysis

Only secondary sources of data are considered in this research. The sources of secondary data of the current study are) annual reports of sample companies; (b) published journals; (c) websites; (d) Newspapers; (e) published books; (f) Rules and Acts of regulatory bodies; (g) published and unpublished PhD and M. Phil theses. Different statistical tools such as average, standard deviation, Minimum, Maximum, correlation, regression, ANOVA, t-test, correlation matrix, variance inflation factor (VIF), etc.have been used for analyzing the data and testing the hypotheses. For making the analysis easy and fast, SPSS and Strata software were used.

5. Analysis and Discussion

5.1. Status of CSR disclosure in Bangladesh

Content analysis is applied in a way where qualitative data have been transformed into quantitative data by developing a comprehensive CSR Checklist. Total number of disclosing items of the prepared checklist is 85 in which 15 items are related to "Environment", 3 items are related to "Disaster management", 2 items are related to "Sports", 3 items are related to "Shelter", 6 items are related to "Women", 1 item is related to Disabled, 5 items are related to "Liberation war", 7 item are related to "Health", 11 items are related to "Education", 4 items are related to "Energy", 4 items are related to "Minorities", 14 items are related to "Employee", 1 item is related to "Product responsibility", 2 items are related to IT, 6 items are related to "Community" and 1 item is related to "Government".

5.2. Extent of CSR disclosure by banking companies

Table 2 shows the extent of CSR disclosure by all the sample companies in their annual reports from 2017-2023. Among the sample companies of the study, it is found that IBBL is at the top in reporting CSR information in its annual reports. The average percentage of disclosing CSR information by IBBL in the year is 45.21%. The maximum percentage of CSR disclosure by IBBL is 48.24% which is disclosed between 2019 and 2023, and the minimum percentage of CSR information disclosure by IBBL is 36.47% which is disclosed in 2021.

Table 2: Showing the Extent of CSR Disclosure by all Sample Banks (in Percentage)

Year	DBBL	PBL	EBL	IFIC	BAL	CBL	IBBL	FSIBL	SJIBL	ICBIBL	Grand mean
2017	41.18	17.65	25.88	13.92	23.24	20.23	47.06	3.53	28.24	12.94	23.39
2018	37.65	16.47	23.53	27.85	28.12	26.00	43.53	23.53	30.59	11.76	26.90
2019	35.29	14.12	25.88	31.65	32.41	29.00	48.24	23.53	31.76	14.12	28.60
2020	30.59	12.94	27.06	31.65	38.12	29.62	45.88	24.71	21.18	7.06	26.88
2021	38.82	15.29	27.06	32.91	39.25	31.65	36.47	22.35	34.12	7.06	28.50
2022	41.18	16.47	27.85	35.28	41.25	29.62	47.06	24.71	30.59	11.76	30.57
2023	38.18	17.65	31.65	38.82	39.25	31.65	48.24	28.24	31.76	12.94	31.84
Mean	37.56	15.80	26.99	30.30	34.52	28.25	45.21	21.51	29.75	11.09	28.10
S.D.	3.70	1.78	2.48	7.98	6.78	4.02	4.18	8.14	4.17	2.87	-
Min.	30.59	12.94	23.53	13.92	23.24	20.23	36.47	3.53	21.18	7.06	-
Max.	41.18	17.65	31.65	38.82	41.25	31.65	48.24	28.24	34.12	14.12	-

Source: The Authors' calculation from annual reports of the sample banks.

The standard deviation is 4.18%. The second top company in disclosing CSR information in annual reports is DBBL. The average percentage of disclosing CSR information by DBBL is 37.56% with a standard deviation of 3.70%. The maximum number of percentages disclosing CSR information by DBBL is 41.18% in 2017 and 2022, and the minimum number of percentages disclosing CSR information by DBBL is 30.59% in 2020. The third top company with respect to reporting CSR information included in its annual report is Bank Asia Limited. The average percentage of disclosing CSR information is 34.52% with a standard deviation of 6.78%. The maximum percentage is 41.25% in 2022, and the minimum percentage of disclosure of CSR items is 23.24% in 2020. The fourth top company disclosed for CSR information is IFIC. The average number of percentages disclosing CSR information is 30.30% with a standard deviation of 7.98%. The maximum percentage is 38.82% in 2023, and the minimum percentage of disclosure of CSR items is 13.92% in 2017. The fifth top company with respect to CSR reporting is SJIBL. The average percentage of disclosing CSR information is 29.75% with a standard deviation of 4.17%. The maximum percentage is 34.12% in 2021, and the minimum percentage of disclosures of CSR items is 21.18% in 2020. The second least disclosed company in CSR information in its annual reports is PBL. The average number of percentages disclosing CSR information is 15.80% with a standard deviation of 1.78%. The maximum percentage is 17.65% in 2017, and the minimum percentage of disclosure of CSR items is 12.94% in 2020. Finally, the least disclosed company of CSR information in its annual reports is ICBIBL. The average number of percentages disclosing CSR information is 11.09% with a standard deviation of 2.87%. The maximum percentage is 14.12% in 2019, and the minimum percentage of disclosure of CSR items is 7.06% in 2020 and 2021. The grand mean of CSR disclosure by the sample banks is 28.10%.

5.3. CSR information disclosed by banking companies under CSR themes

Table 3 presents the number of sample companies disclosing CSR information during each of the selected periods, i.e., 2017, 2018, 2019, 2020, 2021, 2022, and 2023. In this research approach, the number of observations is 70 over the seven years (10 companies each year). Table 3 indicates that the number of CSR disclosing banks has risen marginally in Bangladesh, starting from 55% in 2017 to 63.75% in 2019, with a slight decrease to 63.13% of sample firms in 2021. Again in 2022 and 2023, the disclosure pattern increased to 65.63% and 66.68% respectively. The most disclosed theme is the contribution to "Government". Every company on the sample has disclosed the contribution to the national exchequer in each of the seven-year periods of its annual reports in the CSR section (i.e., the disclosing percentage is 100% in every year). The second most disclosed theme is "Education" (98.57%), and the third is "Community involvement". 97.14% of the sample companies disclose information regarding this theme. The disclosure on the "Health" dimension rose from 70.00% in 2017 to 100% in 2019, with a decrease to 80.00% in 2021.

Table 3: Number of Banks Disclosing CSR from 2017 to 2023

	2017	2018	2019	2020	2021	2022	2023		
Themes	%	%	%	%	%	%	%	Mean	Rank
Environment	70	70	70	70	70	80	90	74.29	8
Dist. Mgt.	80	90	90	90	90	90	90	88.57	5
Sport	60	60	80	70	90	80	90	75.71	7
Shelter	0	10	10	0	10	10	20	8.57	12
Women	50	50	50	70	50	70	60	57.14	9
Disabled	30	30	30	30	30	30	30	30.00	11
Liberation War	10	40	40	30	30	40	30	31.43	10
Health	70	80	100	100	80	100	80	90.00	4
Education	90	100	100	100	100	100	100	98.57	2
Energy	60	70	80	70	80	80	80	74.29	8
Minorities	0	0	0	0	0	0	0	0.00	13`
Employee	100	90	80	90	80	80	90	87.14	6
Product	0	0	0	0	0	0	0	0.00	12
responsibility	U	U	U	U	U	0	U	0.00	13
IT	80	90	90	80	100	90	90	88.57	5
Community	80	100	100	100	100	100	100	97.14	3
Government	100	100	100	100	100	100	100	100.00	1
Average disclosure	55.0	61.25	63.75	62.5	63.13	65.63	66.68	62.59	

Source: Authors' calculation from annual reports of sample banks.

The next most disclosed themes by the sample companies are "IT" information and "Disaster management", and "Employee" information (88.57% companies). The average disclosure percentage of this theme is 86.00%. The disclosure percentages of sample companies of the study relating to the "Energy" theme are 60.00% in 2017, 70.00% in 2018, 80.00% in 2019, 70.00% in 2020, and 80.00% in 2021. The average disclosure percentage for "Environment" is 70%. The trend of disclosing CSR information of sample companies relating to the "Environment" theme is static, as the same number of companies disclosed environmental information during the whole of the study period. Again, the trend of disclosing CSR information on the "Sport" theme is increasing because the results reveal that 60.00% of the sample companies disclosed CSR information in 2017 & 2018, 80% in 2019, dropping to 70.00% in 2020, and again increasing to 90.00% in 2021. The average disclosure percentage of sample companies relating to "Women", "Liberation war", Disabled", and "Shelter" is 54.00%, 30.00%,30.00% and 6.00% respectively. The sample companies under the study did not disclose any information on "minorities" and "Product responsibility" themes

5.4. Ranking of CSR dimensions based on CSR disclosure by sample companies

In this phase, the ranking of CSR themes is shown based on disclosure in percentage. This research attempt shows that the trend of CSR reporting increased throughout the study periods and "government" or "contribution to national exchequer" was the most disclosed theme for all companies in the sample, followed by "education", "community", "health", "disaster management", "IT", "employee", "Sport" "energy" "environment", "women", "liberation war" "disabled" and "shelter" respectively. "Minorities" and "product responsibility" seem to be the least disclosed themes (0%) in banking companies' annual reports in Bangladesh.

 Table 4: Table Showing the Rank of CSR Dimension Based on Disclosure by Sample Banks (In Percentage)

S. N.	Dimension/Theme	Rank	Percentage of disclosure	S.N	Dimensions	Rank	Disclosure
1.	Government	1 st	100%	9.	Energy	8 ^{th*}	74.29%
2.	Education	2 nd	98.57%	10.	Environment	8 ^{th*}	74.29%
3.	Community	3 rd	97.14%	11.	Women	9 th	57.14%
4.	Health	4 ^{th*}	90.00%	12.	Liberation war	10 ^{th*}	31.43%
5.	Disaster management	5 ^{th*}	88.57%	13.	Disabled	11 ^{th*}	30.00%
6.	IT	5 ^{th*}	88.57%	14.	Shelter	12 th	8.57%
7.	Employee	6 ^{th*}	88.57%	15.	Minorities	13 th	0%
8.	Sport	7 ^{th*}	75.71%	16.	Product responsibility	13 th	0%

Source: Authors' preparation based on Table 3.

5.5. Variability of CSR disclosure

Examining the variations in average CSR disclosure across the study's sample of banking companies is the aim of this section. Using SPSS software, analysis of variance (ANOVA) has been performed.

Anova Table

Table 5: Table Showing the Analysis of Variance of CSR Disclosure of All Sample Banks

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4306.665	9	478.518	21.074	.000
Within Groups	908.250	60	22.706		
Total	5214.916	69			
Total observation: 70					

Authors' calculation using financial data

Regarding the variation in mean CSR disclosure between the sample banks and study periods, the ANOVA findings are shown in Tables 5 and 6. Table 5, it is found that the difference in average CSR disclosure among the sample banks is significant at 1% level of significance. It indicates that the difference in the level of CSR reporting among the sample banks of the study is statistically significant. The possible

cause may be the difference in CSR expenditure, the difference in disclosure tendency in the annual reports by each company, the difference in listing age, the role of the independent director, the difference in financial performance, the difference in the company's size, etc.

Anova Table:

Table 6: Table Showing the Analysis of Variance of All Sample Banks During the Study Periods

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	116.40	6	29.102	.257	.884
Within Groups	5172.567	63	110.431		
Total	5341.619	69			
Total observation: 70					

Authors' calculation using financial data

From Table 6, it is evident that there is no statistically significant difference in average CSR disclosure during the study periods for all commercial banks in Bangladesh. It indicates that all commercial banks are consistent in disclosing the CSR activities in their annual report over the period.

5.6. Impact of CSR reporting on financial performance

This section shows the multivariate regression results to investigate the relationship between CSR disclosure and two performance indicators for listed banking companies in Bangladesh using panel data models. The Brauch-Pagan LM test and Hausman test are used to determine which regression model—fixed effects, random effects, or pooled OLS—should be used. Pooled OLS model is less suitable than the random effects model, according to the Brauch-Pagan LM test (Chi=27.98; Prob. = 0.000). However, the Hausman test suggests that the fixed effects model is a better fit than the random effects model. Therefore, the best model to assess the data in this regard is the fixed effects model. Since all the VIF values are less than 10, there is no significant multicollinearity among the independent variables of the model, and the Durbin-Watson statistics of 1.480 show that there is no substantial autocorrelation among the sample banks (Gujrati, 2009). It is found that the coefficients of CSR disclosure, leverage, and tangibility are positively and significantly associated with return on assets at 10% (p=0.087), 1% (P=0.000 & 000) level of significance, respectively, in the fixed effect model. Thus, we see that there is a significant and positive relationship between return on assets and CSR disclosure at the 10% level, and it signifies that the more a company discloses CSR information, the more it may expect a higher return. It suggests that greater transparency and reporting of CSR activities help banks build legitimacy, strengthen stakeholder trust, and improve efficiency, thereby modestly contributing to profitability. Moreover, the highly significant positive effect of leverage (1% level) implies that Bangladeshi banks are effectively using debt to finance profitable opportunities, where the benefits of leverage outweigh the potential costs of financial distress. Similarly, the significant positive association of tangibility (1% level) with ROA indicates that banks with higher levels of tangible assets—such as property, branches, and fixed infrastructure—are better able to secure financing, reduce borrowing costs through collateralization, and utilize assets to generate stable earnings. Together, these findings suggest that strategic investments in CSR, prudent debt management, and maintaining strong asset bases are critical levers for improving bank performance in Bangladesh.

Table 7: Regression Results When Return on Assets (ROA) Is Used as Dependent VariableUsing Fixed Effects Model

Model 1	Fixed effect regr	ression model			Multicollinearity s	tatistics
Explanatory variables	Coefficient	Stand. error	t-value	p-value	Tolerance	VIF
$CSRD_{jt}$	0.074	.042	1.76	0.087*	0.526	1.899
AGE_{jt}	0.123	0.181	0.67	0.476	0.806	1.240
IDIRECTOR _{it}	0.003	.054	0.06	0.956	0.688	1.454
SIZE _TA _{it}	-0.000	7.12e-06	-2.18	0.036**	0.394	2.541
Leverage	0.108065	.0062065	17.55	0.000***	0.543	1.841
Tangibility	0.001387	.0001319	10.38	0.000***	0.243	4.12
Constant	-6.193	2.810	-2.20	0.034		
Group=10; Observation	s: 70; R-squared: 0	0.229; statistics: 12	.68;Prob. >F=0	0.0000; Durbin-wats	son:1.480	
Haussman Test: Chi:13.	27, Probability: 0.0	004;				

Brauch-Pagan LM Test: Chi=27.98; Prob. = 0.000

Source: Author's calculation using financial data from annual reports of sample banks.

Note: ***, ***, and * indicate significance level at 1%, 5% and 10%, respectively.

The coefficient of firm size (Total Assets) is negatively and significantly associated with return on assets at 5% (p=0.036) level of significance. The result indicates that if a company increases its total assets, the return on assets of the company will be reduced. According to the findings, firm size in terms of total assets has a negative impact on performance (Lukman, O. 2017). According to the result, businesses should concentrate on growing their size by increasing turnover and expanding into new markets for current and new goods. Moreover, Table 7 reveals that there is no significant impact of firm age and independent directors on return on assets of publicly traded banks in Bangladesh (P=0.436 &0.956).

Table 8 presents the regression results of model 2, where return on equity (ROE) is used as the dependent variable.

Table 8: Regression Results When Return on Equity (ROE) as A Dependent Variable Using Random Effects (RE) Model

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Model 2	Random effect r	egression model			Multicollinearity st	tatistics
Explanatory variables	Coefficients	Std. error	t-value	p-value (RE)	Tolerance	VIF
CSRDjt	0.0015937	0.0001117	14.26	0.000***	0.526	1.899
AGEjt	0.0004437	.0034630	0.13	0.899	0.806	1.240
IDIRECTORjt	.0472604	.0990012	0.42	0.635	0.688	1.454
SIZE TAjt	-2.52e-12	1.45e-11	-0.17	0.863	0.394	2.541
Leverage	.101345	.0078958	12.84	0.000***	0.604	1.656
Tangibility	.0014686	.0001459	10.07	0.000***	0.737	1.357
Constant	10.752	4.082	2.63	0.008		

Group: 10; Observations: 70; R squared:0.3342; F statistics: 5.78; Prob.>F=0.0033; Durbin-Watson: 1.376

Haussman Test: Chi = 2.43; Probability>Chi (x^2):0.4872;

Brauch-Pagan LM Test: Chi=16.43; Prob.=0.0000

Note: ***, **, and * indicate significance level at 1%, 5% and 10%, respectively.

Firstly, Brauch- Pagan LM test has been conducted, and it indicates that the random effects model is suitable than the OLS model (Chi=16.43; Prob. = 0.000). Secondly, the Hausman test is done and suggests the random effects model is more suitable than the fixed effects model (Chi: 2.43; Probability>Chi (x2):0.4872). The Durbin-Watson statistic is 1.376 indicates that there is no significant autocorrelation in the sample, and VIF values indicate that thereis no serious multicollinearity among the independent variables of the model, as all values are less than 10. The result shows that the coefficient of CSR disclosure is positively and significantly associated with return on equity at 1% level in the random effects model. The positive and highly significant association between CSR disclosure and return on equity (ROE) in the random effects model implies that banks engaging more in CSR reporting tend to generate higher returns for their shareholders. This suggests that transparent CSR practices not only enhance a bank's reputation and stakeholder confidence but also strengthen customer loyalty, reduce non-financial risks, and create long-term value, which ultimately improves equity holders' returns. In other words, CSR disclosure is not merely a compliance activity but a strategic tool that contributes directly to shareholder wealth in the Bangladeshi banking sector. Similar results have been seen in examining the effect of leverage and tangibility on return on equity in relation to return on assets in Table 7.Besides, this analysis reveals that there is no significant influence of firm age, firm size, and independent directors on return on equity.

5.7. Summary of hypothesis testing

Based on the previous analysis and discussion, the results of hypothesis testing:

Hypothesis No.	Statement	Decision
H_1	There is a mean difference in CSR reporting between the sample banks of the study.	Accepted
H_2	There is a mean difference in CSR reporting between the study periods	Rejected
H_3	CSR reporting positively impacts financial performance	Accepted

6. Conclusion

This study investigates the impact of CSR disclosure on the financial performance of listed banking companies in Bangladesh during 2017-2023. The findings of the first phase of the study have provided a detailed description of the nature and extent of CSR disclosure of banking companies in Bangladesh. The second stage of the study detects the average difference of CSR disclosure among the sample banks. The third phase explains CSR disclosure and its relationships relating to financial performance. It is emphasized that the tendency of CSR disclosure is increasing slowly and focuses on financial angles rather than societal opinions, with different patterns of disclosure. CSR disclosure variables consist of 16 (sixteen) dimensions comprising 85 items. The empirical examination reveals a significant variation in CSR disclosure among the banks in Bangladesh. But the opposite result is seen in terms of variation based on the periods of the study. Moreover, the regression results indicate a strong positive and significant impact of CSR disclosure and firm age on financial performance proxied by both return on assets (ROA) and return on equity (ROE). This finding implies that a high amount of CSR increases good financial performance. It also means that older businesses participate in a greater number of CSR projects, which is consistent with the findings of previous research in the literature (e.g., Hossain, 2019; Gheli, 2019; Rouf, 2017; Hakstone and Milne, 1996). Again, the explanatory variable "size", proxied by total assets, is negatively and significantly associated with the financial performance of the company. The result indicates that if a company increases its total assets, the return on assets of the company will be reduced. The possible cause may be that the company could not get enough opportunity to use the assets effectively and efficiently the assets. Moreover, to maintain the assets, the firms had to incur some expenses, which ultimately reduced the profit of the firm. The finding is opposite of Hossain & Saif, (2019); Dogan, (2013); Lee, (2009); Pervan & Visic, (2012); but in the line of Amato, L. H., & Amato, C. H. (2004; Hall, M., & Weiss, L. (1967); Majumdar, S. K. (1997); Whittington, G. (1980); Yang, C. H., & Chen, K. H. (2009). The coefficient of firm age, independent directors, is positive but not statistically significant in both regression models. The effect may not always be significant because older firms can also suffer from organizational rigidity, outdated practices, or slower adaptability (Majumdar, 1997), and independent directors sometimes lack real power or expertise to influence decisions (Adams & Ferreira, 2007). The two regression models revealed that leverage and tangibility positively impact on financial returns of banks in Bangladesh. Leverage often improves profitability when firms use debt efficiently to finance growth, benefit from tax shields, and reduce the cost of capital. In banking, leverage is particularly relevant because debt is a core component of their business model (Berger, 1995; Saeed & Rasheed, 2013). Tangibility (the share of fixed assets in total assets) can also positively affect returns because tangible assets serve as collateral, reducing financing costs and credit risk, which is especially important for banks (Chen & Chen, 2011; Zeitun & Tian, 2007; Saeed et al., 2013). Moreover, this study has both academic and practical significance. In the beginning, as per the researchers' knowledge, the CSRR index constructed in the study is the first rigorous and comprehensive index applied to the banking industry in a developing economy context. Prior studies present incomplete and inconclusive results regarding CSR reporting and its relationship with profitability, firm characteristics, and corporate governance. To close this gap, this study includes firm characteristics variables (firm age, firm size), corporate governance elements, i.e., independent director, leverage, and tangibility. This examination has a few pragmatic ramifications. This investigation underpins current business social disclosure. Policymakers should be cautious concerning the plan and execution of the head of a business and building an observation cell that guarantees continuous CSR disclosure. Additionally, the regulatory authorities ought to set up explicit rules to check whether CSR disclosures depend on genuine exercise or simply a "greenwash" explanation to deceive stakeholders. It could likewise assist different stakeholders by observing how dependable and straightforward financial reporting is. Considering the study findings, controllers and policymakers can utilize such findings to propose and give guidelines that secure the board rules and likewise improve straightforward financial and non-financial reporting quality. Strategy formulators ought to advance more CSR activities for the improvement of society that may satisfy the cultural responsibility. Likewise, investors' counsel can utilize the findings during the time spent carefully choosing their speculation portfolios by putting resources into firms that perform greater CSR activities and exposure, since administrators may utilize entrenchment instruments to mislead stakeholders. The regulatory body issued a guideline on CSR programs by banking companies, which is still voluntary, and it is now urgent to make a comprehensive CSR reporting framework for the banking industry in Bangladesh, like the Global Reporting Initiative (GRI). The government should offer commercial incentives, CSR reporting rewards, and a penalty for nondisclosure. Finally, the banking industry needs to introduce CSR reporting templates, link CSR practices to credit rating or regulatory incentives, and enhance monitoring through the Bangladesh Bank CSR desk.

This investigation has given roads to further exploration. Such roads illustrate that financial performance is proxied by two indicators in this study, whereas future studies may consider other indicators like EPS, operating profit, Tobin's Q, etc. Managers might manipulate earnings due to speculative thought, self-interest, or pressure from top authorities. This could typically be recognized through a qualitative examination or questionnaire-based research. It might be worth vibrant by examining different sectors and institutional frameworks. This study focused on a directional relationship between CSR disclosure and financial performance, so future studies could be extended by examining two directional relationships and incorporating other related independent variables. This study is confined to only one country, namely Bangladesh. Hence, future studies can be conducted on various emerging economies of the globe.

Author Contributions:

Conceptualization -Mst Rinu Fatema, Md. Mahofuzur Rahman and Dr. Md. Sumon Hossain; Methodology, Dr Sumi Saha, and Dr. Most Hasna Banu; Software: Dr. Md. Sumon Hossain, and Mst Rinu Fatema; Validation, Md. Mahofuzur Rahman.; Formal Analysis: Dr. Md. Sumon Hossain; Investigation, Mst Rinu Fatema.; Resources: Dr. Mst Hasna Banu; Data Curation: Dr Sumi Saha.; Writing —Original Draft Preparation, Mst Rinu Fatema; Writing —Review & Editing: Dr. Md. Sumon Hossain, and Md. Mahofuzur Rahman; Visualization: Dr. Mst Hasna Banu, Supervision: Mst Rinu Fatema and Dr. Md. Sumon Hossain. Authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement:

Ethical review and approval were waived for this study because the research does not deal with vulnerable groups or sensitive issues.

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Data Availability Statement

The data presented in this study are available on request from the corresponding author. The data is not publicly available due to restrictions.

Conflict of Interest

The authors declare no conflict of interest

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Appendix A

List of Sample Companies of the Study

S. N.	Acronym	Full Name
1.	DBBL	Dutch-Bangla Bank Limited
2.	PBL	Pubali Bank Limited
3.	IFIC	International Finance Investment and Commerce Bank Limited
4.	EBL	Eastern Bank Limited
5.	BAL	Bank Asia Limited
6.	CBL	City Bank Limited
7.	IBBL	Islami Bank Bangladesh Limited
8.	SJIBL	Shajalal Islami Bank Limited
9.	FSIBL	First Security Islami Bank Limited
10.	ICBIBL	ICB Islami Bank Limited

Source: Prepared by the Researchers.