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Impact of Corporate Governance on ESG and Financial Performance: A Comparison Between Commercial and Islamic Banks

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ABSTRACT

The purpose of this study was to determine the impact of corporate governance on ESG disclosure and financial performance of selected commercial and Islamic banks in Bangladesh. The study period selected was from 2015 to 2020, with a sample size of 18 banks. Through an extensive literature review, the author developed two models, which have coinciding variables and are thus comparable in the same study period. By applying correlation and linear regression on two separate models, the study aimed to first find the impact of specific variables (Revenue, Firm size, Board size, Leverage) on ESG. Then the impact of these variables on financial performance is also determined. Using the findings, which showed that ESG has a positive relationship with firm and board size, along with financial performance being positively affected by the board size and firm size, the results are compared and contrasted. The comparison showed that both commercial banks and Islamic banks showed similar findings in terms of what affects ESG disclosure levels and the financial performance of the banks. This study recommends that management pay extra attention to the level of ESG information disclosed, as this can have long-term growth implications.

Keywords: Financial Performance, Corporate Governance, ESG, Sustainability, CSR disclosure.
JEL Classification: M14, G21, G34, B26.
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1.0 Introduction

Over the past few decades, since the global financial crisis (GFC), the business world has undergone fundamental changes showing inevitable interconnection with the world economy.

This has developed into corporate concerns regarding risk control, unethical behavior, accountability, and the strategic management of stakeholders. With the process of this insurgent change, the demand for better business reports continues to rise along with the increasing focus on encouraging companies to include more

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non-financial information in their reports. To be more specific, it is the ESG-based concerns that the market investors are emphasizing. ESG issues became more prevalent when investor confidence weakened during the post-Enron period and global financial crisis resulting in the increase of attention toward social changes (Galbreath, 2013). As sustainability becomes more and more important around the globe for economic development, along with the lack of non-financial information in the annual reports being a concern, it became an international need to disclose environmental, social, and corporate responsibility (Li, Gong, Zhang, & Koh, 2018). ESG issues illustrate the operational effect of the firm on the society, environment, and quality of corporate governance giving a precise perspective that the investors as well as the society will be benefitted if ESG is included while making investment decisions. This is because ESG disclosure is considered a key component for sustainable development as it is believed to incorporate sustainable returns with transparency and accountability towards the society and environment. Moreover, stakeholders nowadays tend to believe, socially irresponsible companies may face possible litigation costs and also end up destroying shareholder value. Hence, investors prefer to invest in firms with good ESG records to safeguard their assets and also contribute to society.

1.1 Rationale of the study

In contrast to many developing countries, the performance status of Bangladeshi firms regarding non-financial disclosure practices did not seem to be up to scratch compared to others. Despite having tremendous economic growth, the country is still far behind in the issue. This might be due to insufficient pursuance of the existing laws or the lack of demand from the stakeholders (Ahmed & Rahman, 2014). Bangladesh ranked 162 out of 180 countries in the Environmental Performance Index (EPI) in 2018 which shows very well how degrading the sustainability and environmental condition is (Bhuyian & Hussain, 2020). Moreover, there have been reports of major ESG-related incidents over the years. More than 3.5 million investors were affected due to the stock market crash in 2010-11 resulted in a huge loss in their investments (Tahera, 2014). The investors' confidence was again moved by the Sonali Bank loan scam in 2012. It is said to have illegally given out approximately BDT 36.48 billion as loans (Mahmood & Islam, 2015). However, the stakeholders started questioning the ethical and social practices after the Tazreen Garments fire incident in 2012 and the Rana Plaza collapse in 2013. The Tazreen Garment fire incident left 112 killed and more than 100 people injured while the Rana Plaza collapse left 1134 loss of lives including more than 2500 others injured. Investors experienced stress due to the financial losses they incurred from the accidents at the same time accusations were made of profit-seeking at the cost of social and communal safety (Sultana, Zainal, & Zulkifli, 2017). Hence, the conclusion was reached that sustainable returns will be affected by ethical malpractices which later influenced the investors to be more careful about the ESG disclosures by the firms in Bangladesh though it is still scarce in practice. Nonetheless, even though there is more and more study on ESG in developing countries the number of research centering on the Bangladeshi context is relatively rare. Hence, this paper aims to fill the gap by assessing the impact of ESG disclosure on firm performance focusing mainly on the Banking sector.

1.2 Objective(s) of the study

Although ESG is not a decade-old concept, there have been already several works on it. But comparatively, there has been less research on the effect of ESG disclosure on the Bank industry of Bangladesh using the latest data.

1. Determine the effect of ESG disclosures on the selected listed banks in Bangladesh.
2. Compare and contrast the state of ESG disclosures of selected commercial banks and Islamic banks of Bangladesh within the time frame of 2015-2020.
3. Determine the impact of selected factors on the financial performance of the banks.
4. Compare and contrast the impact of specific factors on the financial performance of the selected commercial and Islamic banks.

2.0 Literature review

The incorporation of ESG in the reporting of entities has been a topic that has evolved. From the concept of CSR to the concept of ESG, this change in the perception of social responsibility has taken its time. (Matuszak, Rozanska, & Macuda, 2019) conducted content analysis to understand the impact of specific corporate governance elements on CSR disclosure. The authors took an extensive analysis approach and conducted content analysis on the annual reports of the selected companies. This analysis covered the period between 2008 to 2015. This long period ensured that CSR activities are analyzed critically. The sample selected for the study included commercial banks in Poland. To complement the content analysis, the authors took independent variables which included the size of the bank, the size of the board of the banks, and the diversity of the board of the selected banks. Using these variables and the content analysis method to calculate the CSR scores for the banks, the authors then proceeded to implement panel data analysis on the sample data. the findings obtained from this research work showed that the banks displayed better levels of Corporate social responsibility disclosure practices in the observed period of 2008 to 2015. The panel data analysis revealed that banks with

different levels of ownership structures showed statistically significant differences in the CSR reporting or disclosure level. The authors also pointed out that foreign majority shareholder groups, along with state majority shareholder groups showed an influence on a positive level of Corporate Social Responsibility. This is in comparison with the Polish majority shareholder group; however, this excluded State. The researchers then found that the commercial banks in the study showed that being listed on the stock exchange has a positive and significant impact on CSR, in comparison to those banks which were not listed on the stock exchange. The results of this study are indeed insightful. Along with these findings, the results also showed that there is a positive impact, which was also significant, of almost all the variables of the study (namely management board, the board size, female leadership on the board, as well as foreign board members) on the corporate social responsibility reporting/disclosure practices of the banks. The variables of ownership, along with the board variables, did not show any significant impact on the CSR disclosure on a statistically significant level. This paper contributed to the already rich literature by further complimenting the past findings. The findings of this research were consistent with the works of past authors. This paper also provided a key tool- an instrument to measure CSR in the banking industry.

(Abdul et al., 2013a) focused on the effect that corporate governance can have on the financial performance of organizations. The authors undertook this research work to understand the structural relationship between the variables. This study used an approach of developing a model which linked financial performance and corporate governance. This relationship was then verified through an incredibly detailed structural equation modeling. This model was based on partial least squares. The sample companies for this work consisted of all the listed companies of the Karachi Stock Exchange. The data used for analysis was collected from the annual reports of the companies. The authors of this research documented in their paper that the results of this research revealed the existence of a structural relationship that was critical. The relationship was established between corporate governance and financial performance. the data analysis was supplemented by the use of PLS Graph software. In this work, the results stated that corporate governance does not improve financial performance consistently. It is more of a technical view. It proposes that the indicators of corporate governance can improve financial performance if intangible resources are exploited. Since this study included all the companies in the Karachi Stock Exchange, it provided a detailed insightful understanding of the relationship between financial performance and corporate governance.

(Chijoke-Mgbame et al., 2020) takes a different perspective into account. This paper set out to investigate the effect that corporate governance has on firm performance, along with analyzing the role that corporate governance plays in the CSRD-firm performance relationship. The study focused on the listed companies in Nigeria. The method of analysis used was to use a panel data set, which incorporated 841 firm years of data. This large sample of data was covering the period between 2007 and 2016. The authors proceeded to use Fixed effect regression analysis to examine the proposed relationship. Results showed that there are positive performance impacts on organizations that engage in corporate social responsibility disclosure activities. A statistically significant relationship showed strong evidence of an existing positive impact of the independence of the board with the corporate social responsibility of the firms. The contribution made by this particular research work was quite insightful. It showed that understanding the CSR disclosure activities of firms can help to determine how these disclosures impact financial performance. Stronger regulations are suggested by the authors to ensure that disclosures are maintained by organizations. As per the findings, there are clear economic benefits to the enforcement of CG mechanisms.

Ajanthan et al., 2013 focused on four aspects of corporate governance which included the size of the board, diversity of the board, percentage of outside directors on the company board, along with the frequency of board meetings of the company. This paper, much like the past literature discussed, targeted to find the relationship between banking performance and corporate governance. The sample consisted of the private and state banking sector of Sri Lanka. Here, the authors incorporated the use of Return on Equity and Return on Assets, which have also been used in this internship report. These two variables, as found in various literature, have been extensively used as a proxy for accounting for the financial performance of companies. The authors in this paper incorporated correlation and regression to test for the hypothesized relationships. These tests illustrated that corporate governance factors are positively correlated with return on equity in state and private banks in Sri Lanka. As per the results, except for diversity on board and board meeting frequency, other variables used in the study showed negative relation with ROE. Just like this result, except for board meeting frequency, all the other variables showed a negative relationship with ROA in state banks. The use of correlation to determine the relationship between the study variables provided a strong foundation for tests used in this internship report as well. (Ajanthan et al., 2013) also recorded that Board Diversity displayed a strong negative relationship with Return on Assets in the state-owned banks, at a significance level of 5%. The authors pointed out, however, that in private banks, the relationship between Return on Assets and Board Diversity is positive, but not significant. To end the analysis, the final finding showed that corporate governance recorded a moderate effect on the performance of both state and private banks.

Orazalin, 2019 used data from the banking sector of Kazakhstan as the sample to study. This research work used data covering the period from 2010 to 2016. The main aim of the paper was to discover the degree

and nature of CSR disclosure in the selected sector in Kazakhstan. The data was collected from annual reports, as most past papers have demonstrated. The banking sector is the source of the lifeblood of the organization puts it into focus. The data of the banks selected for this study were taken from the annual reports of the Kazakhstan Stock Exchange. This was an empirical analysis, and the findings of the paper showed that Board/Gender Diversity influenced CSR reporting. This influence was positive. The other variables used in the paper, which included the size of the bank, as well as the age of the bank, empirically proved to be significant contributors to the CSR disclosures provided by the banks. Further complimenting the past literature, in this paper the authors found evidence that foreign ownership discloses more transparent information on Corporate Social Responsibility undertaken by the banks. The existence of foreign ownership resulted in extensive disclosures being provided for CSR activities. Banks that were owned by domestic investors, along with state-owned banks, showed fewer CSR disclosures compared to banks with foreign ownership.

Sharif & Rashid, 2014 attempted to explore how the commercial listed banks in Pakistan incorporated CSR reporting. The authors selected a group of different corporate governance variables to test whether the sample banks showed similar results as past literature. The authors took the study one step further by accumulating and incorporating different theories to try and explain the findings of the paper. The method used to determine the CSR disclosure level was content analysis. Indeed, content analysis is the most appropriate method to determine the level of CSR disclosures in the annual reports of the companies. The selected period was 2005 to 2010. To test for the authenticity and relevance of the proposed hypotheses of this study, the researchers conducted multiple regression analyses. The variables selected were the number of foreign directors on the board, as well as Non-executive directors on the board. After checking for verifiability of the proposed relationships using regression, the authors stated that even though Corporate Social Responsibility was voluntary in Pakistan, the studied listed commercial banks did not disclose low levels of CSR. The disclosure levels were higher than anticipated. The authors praised the degree of participation of the banks in CSR. Non-executive directors, one of the independent variables of this study, showed a positive effect on CSR reporting. As the authors intended, they also linked this finding with a theory, stating that stewardship theory is in support of this result in CB of Pakistan.

Corporate & social:

As per the theory of shareholder's value maximization, it is suggested that initiatives regarding the welfare of society have a positive impact on the wealth of shareholders as emphasizing the betterment of others increases eagerness to support a company's operation and as a result, it increases the shareholder's wealth (Deng et al., 2013). However, shareholders tend to have a negative reaction when there is negative CSR news. While, on the other hand, if there are no to little agency problems shareholders react a bit more favorably and stock prices tend to rise due to managerial efforts to counterbalance the previous corporate social irresponsibility (Kruger, 2015). Moreover, the contract theory and Coase's theory of the firm advanced (Coase, 1937) and other relevant theories in this concern (Alchian & Demsetz, 1975), (Hill & Jones, 1992) strongly support the view of the value maximization of the stakeholder.

Additionally, the contract theory states that a firm with a higher CSR score tends to have a stronger inclination toward commitments to its shareholders and customers. As a result, the shareholders of the such firm feel more motivated to contribute to its operation, whereas the stakeholders of a lower CSR might not have this incentive to contribute to the firm's profitability.

However, the shareholder expense view does not suggest the same view as the value maximization theory. According to shareholder expense theory, companies involved in CSR practices help other stakeholders using the resources of the existing shareholders (Vance, 1975),(Pagano & Volpin, 2005). As per (MORCK et al., 1990), managers can also use their CSR fund to hurt the firm's performance by engaging themselves in agency problems. Furthermore, (Flammer, 2015) examined the effect of shareholder proposals on CSR activities that pass or fail by a close call on the financial performance. Findings show that adopting the close call proposals invites positive returns and better accounting performance with the implication that these close call proposals enhance the value of both the firm and the shareholders. Nonetheless, close-call CSR proposals being enhanced for the firm does necessarily prove that all CSR proposals are beneficial.

Environmental

The prior studies regarding the relationship between disclosing environmental information and a firm's performance reveal that there is a significant relationship between these two. Bird et al., 2007, observe that if a firm fails to meet the regulatory standards related to the environmental dimension, the market value of the concerned firm is negatively affected. On the contrary, if a firm follows the regulatory and community standards accordingly, the market value is positively affected by such actions. In addition to that, Russo & Fouts, 1997 document that higher corporate environmental ratings can have a positive influence on a firm’s corporate performance as well.

Moreover, a study conducted by (Costa Lourenço et al., n.d.) shows that corporate sustainability performance has a significant positive impact on the stock prices of America over the conventional performance indicators - book value of equity, and earnings. It is also noticed that large companies with lower corporate

sustainability scores are penalized by investors and stakeholders. As claimed by (Porter & van der Linde, 1995), a firm's revenue can be lowered by the firm's inconsideration regarding the environment.

Furthermore, it has been observed that appropriate corporate policies and guidelines can bring about better firm performance. Different studies-(Russo & Fouts, 1997), (Spicer, 1978), (Hart & Ahuja, 1996), (Clark et al., 2014) advocate investing in sustainable and eco-friendly measures as these measures tend to pay off in a long run. (King & Lenox, 2002) shows that proper implementation of waste prevention and management seems to lead to improved financial performance. It is also evident from the study (Hart & Ahuja, 1996) that a positive relationship can be developed between the welfare of stakeholders and the firm's overall performance by implementing environmental guidelines and disclosing those regularly.

On the other hand, a study regarding the British stock market suggests otherwise. (Brammer et al., 2006)'s analysis of portfolios from 2002 to 2005 states that there is a negative relationship between their community and environmental indicators and stock returns. Additionally, the investigation of (Semenova et al., 2010) is also in line with the findings of (Brammer, Brooks, & Pavelin, 2006) which state that there is a negative relationship between the market value of firms and environmental performance in the case of Swedish companies, from June 1998 to September 2000. However, a follow-up study by (Semenova et al., 2010) has observed a positive association between the environmental and social performance of US companies. Furthermore, a positive impact of sustainability reporting and disclosures on the market value banks of European countries has also been perceived (Carnevale & Mazzuca, 2014). In addition to that, it was found that the firms leading in sustainable performance tend to excel in the market portfolio according to Dow Jones Industrial Average. Moreover, (Lee & Faff, 2009) discovered that firms with higher corporate social performance have a significantly lower idiosyncratic risk and vice versa.

Governance:

(Mehran, 1995) provides a remarkable notion of a firm's financial performance being directly related to the compensation structure of top executives. This study has further stated that the level of remuneration motivates managers to positively impact the profitability of their company. It is, however, important to note that the remuneration scheme should be properly designed to prevent managers from taking excessive risks at the expense of their companies. As per (Core et al., 1999), a poorly designed executive scheme can lead to poor financial performance and negative stock return. Besides, this study also reports that higher remuneration of executives and weaker corporate structure might lead to agency problems.

Based on the literature reviewed, this study developed 4 hypotheses, which are to be tested into two separate equations. These hypotheses test the impact and the relationship of the selected variables on ESG, as well as the financial performance of the banks.

3.0 Hypotheses

For model 1 analysis, which focuses on determining the relationship of ESG with financial and non-financial factors of banks, the following hypotheses have been developed

H1: ESG score has a positive relationship with Revenue.

H2: Firm size has a positive relationship with ESG disclosure score.

H3: Leverage has a positive relationship with ESG score.

H4: Board size has a positive relationship with ESG score.

For the second model, which focuses on determining the relationship between financial performance (ROE used as a proxy) with firm-specific factors, the following hypotheses are used:

H5: ROE has a positive relationship with Revenue.

H6: Firm size has a positive relationship with ROE.

H7: Leverage has a positive relationship with ROE.

H8: Board size has a positive relationship with ROE.

4.0 Methodology of the study

This part describes the research methodology for this study and sample selection, selection of the period, source of the data, research variables, data analysis technique, and model development.

Sample selection

For this research, the data was selected from DSE-listed companies. The banking sector has been selected and 18 banks were picked for research purposes. This included 10 commercial banks and 8 Islamic banks.

Selection of the period

For this research, the sample period selected was from 2015 to 2020. This period has been selected to understand the latest trends and impact of the selected independent variables on the dependent variable.

Source of the data

This paper uses quantitative analysis. For this study, data is collected from secondary sources. Secondary data is collected mostly from the annual reports of the respective organizations. Annual reports are collected from company websites, the Lanka Bangla Finance Ltd. website, and the website of DSE.

Data analysis techniques

This paper uses the content analysis technique to calculate the ESG disclosure scores of the banks. This score is divided into sub-categories, which are then added to accumulate the total score. Data has been analyzed using the statistical software STATA. Multiple statistical tools, which include Pearson Correlation and Linear Regression, have been used. These methods of analysis have been used to get deep insights into the data and draw relationships.

Research variables

In this research, the independent variables selected comprised financial and non-financial factors. There are two dependent variables, one being the ESG score, and the other being Return on Equity. There are two dependent variables because this paper investigates two aspects. The first aspect is the ESG disclosure, and the second aspect is the impact of the same variables on the financial performance of the banks.

Dependent variable

ESG:

The independent variable, ESG, was measured through content analysis. For the content analysis, this paper adopted the index from the article of (Clark, Feiner, & Viehs, 2015). The Index is illustrated below:

Environmental	Social	Governance
Biodiversity/Land use	Community relations	Accountability
Carbon emission	Controversial Business	Board structure/size
Climate change risk	Customer relations/product	CEO duality
Energy usage	Diversity issues	Executive compensation schemes
Raw material sourcing	Employee relations	Ownership Structure
Regulatory/Legal risks	Health and Safety	Shareholder rights
Supply chain management	Human capital management	Transparency
Waste and recycling	Human rights	Voting procedures
Water management	Responsible marketing and R&D	
Green banking	Union relationships	

For this study, we analyzed the degree of ESG disclosure1. If an item is found in an annual report, a score of ‘‘1’’ was recorded, otherwise ‘‘0’’.

Total Asset: The total asset comprises the consolidated amount of both short-term and long-term assets that the company owns which is denoted in the balance sheet as heading “total assets”.

Total revenue: The total revenue can be denoted as the gross receipt that the business gets in return for its products or services. It is usually the first item in the statement of financial performance.

Firm Size: For this paper, ‘‘firm size’’ is calculated by the natural logarithm of the year-end of total assets.

Earnings before interest and tax: EBIT can be obtained through revenue net of all expenses such as operating expenses, selling, and administration expenses, other expenses, etc. It is an indicator of profitability for a company that is recorded in the statement of financial performance.

5.0 Model development

The model that was given below is to improve by us to evaluate the relationship between the net interest income and the. The regression model is:

i. $ESG_{Cit} = \beta_0 + \beta_1(Rev) + \beta_2(F_size) + \beta_3(Lev) + \beta_4(B_Size) + \epsilon_I$ ---- Equation 1

Table.

Abbreviated Name	Full name	Description of the variable	Predicted sign	Data source	References
		Dependent Variable			
ESG	Environment, Social, and Governance	Dummy variable (1 for disclosure, 0 for non-disclosure)	+(positive)	Annual Report	(A. Kocmanová, 2012), (Raisa Almeyda, 2019) (Clark, Feiner, & Viehs, 2015)
		Independent Variable			
Rev	Revenue	Total year-end revenue	+(positive)		
F_Size	Firm Size	Natural Logarithm of the total assets of the company	+(positive)	Annual Report	(Buniamin*, 2008)
Lev	Leverage	The ratio of Total Debt to Total	+(positive)	Annual Report	(Chijoke-Mgbame et al., 2020b)

		Equity			
B_size	Board Size	Total number of directors on the board	+(positive)		(Orazalin, 2019b)
ϵ_i	Random Error	-		-	-

ii. $ROE_{Cit} = \beta_0 + \beta_1(Rev) + \beta_2(F_size) + \beta_3(Lev) + \beta_4(B_Size) + \epsilon_I$ ---- Equation 2

Abbreviated Name	Full name	Description of the variable	Predicted sign	Data source	References
		Dependent Variable			
ROE	Return on Equity	Ratio of Net Income to Total Equity		Annual Report	(Abdul et al., 2013)
		Independent Variable			
Rev	Revenue	Total year-end revenue	+(positive)		
F_Size	Firm Size	Natural Logarithm of the total assets of the company	+(positive)	Annual Report	(Buniamin*, 2008)
Lev	Leverage	The ratio of Total Debt to Total Equity	+(positive)	Annual Report	(Chijoke-Mgbame et al., 2020)
B_size	Board Size	Total number of directors on the board	+(positive)		(Orazalin, 2019)
ϵ_i	Random Error	-		-	-

6.0 Research findings and analysis

Correlation (ESG): Commercial Banks

	ESG	Rev	Firm size	Lev	B_size
ESG	1.0000				
Rev	-.2274*	1.0000			
firm size	-.1344	0.4609***	1.0000		
Lev	-0.0393	-0.4164***	-.4069***	1.0000	
B_size	.6283***	-.2987**	-.3757***	-0.0060	1.0000

(*** represents a 10% significant level, ** represents a 5% significance level, * represents a 1% significance level)

The above table shows the correlation matrix of the 10 commercial banks which indicates the relation between the dependent variable ESG with the independent variables. From the table it can be explained that ESG has a negative correlation with revenue (-0.2274) at a 1% significance level, Firm size (-0.1344) with no significance, level (-0.0393) with no significance, and a positive relation with B_size (0.6283) with a 10% significance level. The control variable revenue has a positive relationship with firm size (0.4609) at a significance level of 10%, a negative relationship with leverage (-0.4164) at a 10% significance level, and with B_size (-0.2987) at a significance level of 5%. The independent variable firm size has a negative relation with leverage (-0.4069) at a significance level of 10% and with board size (-.3757) at a significance level of 10%. Lastly, leverage has a negative relationship with board size with no significance. Here it can be noted that the variables of firm size and board size could be considered as the representation of corporate governance.

The test for multicollinearity was also run. As evident in (Appendix – Table- 1), the mean VIF value is 1.41. This shows that there is no multicollinearity problem, as 1.41 is well within the accepted range of 10.

Regression (ESG): Commercial Banks

ESG	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
Rev	-.7843475	.884949	-0.89	0.379	-2.557821	.9891257
Firm size	2.142181	1.647379	1.30	0.09	-1.159241	5.443602
Lev	-.0692841	.4467699	-0.16	0.877	-.964631	.8260629
B_size	6.595618	.7877169	8.37	0.000	5.016998	8.174238
_cons	-32.52065	49.63077	-0.66	0.515	-131.9829	66.94163

A heteroskedasticity test was run to check if the regression has any heteroskedasticity problem (Appendix- Table -2). As seen in the table, the chi-square value is high, and the p-value is low. This means that it is statistically significant. So, there is a heteroskedasticity problem in the model. To negate the heteroskedasticity effect in the model, the regression was adjusted with the robust command. The robust regression minimizes the influences of outliers or unusual observations present in the dataset and makes the model more acceptable.

The coefficient of determination (R-squared) resulted at 41.56% which indicates that 41.56% of the variation in the dependent variable, ESG, can be explained by the variation in the independent variables taken for the study. This model is hence deemed fit for this study. The next section describes the results of the regression test that was run.

The main purpose of this study was to determine the impact of corporate governance and financial performance on ESG: comparison of commercial and Islamic banks of Bangladesh. The ESG disclosure in the regression table shows a negative relationship with firm performance such as revenue and firm's leverage but shows a significant positive relationship with the variables firm size and board size that represents the corporate governance.

Correlation (Financial Performance): Commercial Banks

	ROE	Rev	Firm size	lev	B_size
ROE	1.0000				
Rev	0.4248***	1.0000			
firm size	-.2096	0.4609***	1.0000		
Lev	0.1976	0.4164***	-.4069***	1.0000	
B_size	0.0027	0.2987**	-0.3757***	-0.0060	1.0000

(*** represents a 10% significant level, ** represents a 5% significance level, * represents a 1% significance level)

The above table shows the correlation matrix of the 10 commercial banks which indicates the relation between the dependent variable ROE which is an indicator of financial performance with the independent variables. From the table it can be explained that ROE has a positive correlation with revenue (0.4248) at a 10% significance level, a negative correlation with Firm size (-0.2096) with no significance, a positive correlation with lev (0.1976) with no significance and a positive relation with B_size (0.0027) with no significance level. The control variable revenue has a positive relationship with firm size (0.4609) at a significance level of 10%, a positive relationship with leverage (0.4164) at a 10% significance level, and with B_size (0.2987) at a significance level of 10%. The independent variable firm size has a negative relation with leverage (-0.4069) at a significance level of 10% and with board size (-.3757) at a significance level of 10%. Lastly, leverage has a negative relationship with a board size (-0.0060) with no significance. Here it can be noted that the variables of firm size and board size could be considered as the representation of corporate governance and leverage and revenue can be considered as a part of financial performance. The financial indicator ROE has a significant positive relationship with a firm's revenue which means that if revenue increases the financial performance of the firm also increases that is consistent with the findings of prior studies. Increased revenue means that the firm is efficiently utilizing the capital and creating an even greater return which is denoted by the ROE. Without a doubt, ROE and revenue are significantly related. Leverage on the other hand has also a positive relationship with the ROE but it is not significant. The amount of leverage a firm has does not significantly affect the utilization of the capital but it merely enhances the process of utilization. The board size having a positive relationship with the ROE means that the decisions that are taken by the directors affect the return somewhat, but it is not significant.

The control variable revenue has a strong positive correlation with the independent variables- firm size, leverage, and board size which is consistent with prior studies. The firm size significantly affects the revenue because larger firms have a wider range of operations which creates larger revenues than smaller firms. In turn, it also increases the return on capital unlike that of a smaller firm. When a firm is big enough the decisions taken by the directors affect the cash flow on a larger scale than that of the small firms which justifies the significant positive relationship between board size and revenue.

The test for multicollinearity was also run. As evident in (Appendix – Table- 3), the mean VIF value is 1.41. This shows that there is no multicollinearity problem, as 1.41 is well within the accepted range of 10.

Regression (Financial Performance): Commercial Banks

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
Rev	0.0706577	0.0104814	6.74	0.000	0.0496525	0.0916629
Firm size	-0.0685266	0.0212888	-3.22	0.002	-.1111903	-0.025862
Lev	0.0172536	0.0053363	3.21	0.002	0.0065594	0.0279478
B_size	0.0121635	0.0140696	0.86	0.391	-0.0160327	-0.0403597
_cons	0.2113687	0.5731675	0.37	0.714	-.9372846	1.360022

A heteroskedasticity test was run to check if the regression has any heteroskedasticity problem (Appendix- Table -4). As seen in the table, the chi-square value is low, and the p-value is high. This means that it is not statistically significant. So, there is no heteroskedasticity problem in the model.

The coefficient of determination (R-squared) resulted at 44.94% which indicates that 44.94% of the variation in the dependent variable, ESG, can be explained by the variation in the independent variables taken for the study. This model, hence, can be deemed fit for our study. The next section describes the results of the regression test that was run.

The main purpose of this study was to determine the impact of corporate governance and financial performance on ESG: comparison of commercial and Islamic banks of Bangladesh. The ROE which is the indicator of the financial performance of the firm shows a negative relationship with the firm's revenue, leverage, and board size and a negative relation with firm size.

Correlation (ESG): Islamic Banks

	ESG	rev	firm size	lev	B_size
ESG	1.0000				
Rev	0.5325***	1.0000			
firm size	0.5773***	0.9298***	1.0000		
Lev	0.0285	0.4118***	0.5626***	1.0000	
B_size	0.6978***	0.3543	0.4118***	-0.0323	1.0000

(*** represents a 10% significant level, ** represents a 5% significance level, * represents a 1% significance level)

The above table shows the correlation matrix of the 10 Islamic banks which indicates the relation between the dependent variable ESG with the independent variables. From the table, it can be explained that ESG has a positive correlation with revenue (0.5325) at a 10% significance level, Firm size (0.5773) at 10% significance, lev (0.0285) with no significance, and a positive relation with B_size (0.6978) with a 10% significance level. This result defers from that of the commercial banks. Unlike commercial banks, it seems Islamic banks' ESG is impacted positively by their financial performances. The control variable revenue has a positive relationship with firm size (0.9298) at a significance level of 10% which is natural that the larger the bank the higher the revenue, positive relationship with leverage (0.4118) at a 10% significance level, and with B_size (0.3543) at no significance which means their revenues are not affected by the board decisions. The independent variable firm size has a positive relation with leverage (0.5626) at a significance level of 10% and also with a board size (0.4118) at a significance level of 10%. Lastly, leverage has a negative relationship (-0.0323) with board size with no significance. Here it can be noted that the variables of firm size and board size could be considered as the representation of corporate governance.

The test for multicollinearity was also run. As evident in (Appendix – Table- 1), the mean VIF value is 6.30. This shows that there is no multicollinearity problem, as 6.30 is well within the accepted range of 10.

Regression (ESG): Islamic Banks

ESG	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
Rev	-0.9932177	1.491264	-0.67	0.509	-4.000637	2.014202
Firm size	3.448383	1.663226	2.07	0.044	0.0941685	6.802597
Lev	-0.1922009	0.0547367	-3.51	0.001	-.302588	-0.0818138
B_size	0.4716144	0.0761233	6.17	0.000	.3174923	0.6257366
_cons	-53.3465	15.6451	-3.41	0.001	-84.89785	-21.79516

A heteroskedasticity test was run to check if the regression has any heteroskedasticity problem (Appendix- Table 2). As seen in the table, the chi-square value is high, and the p-value is low. This means that it is statistically significant. So, there is a heteroskedasticity problem in the model. To negate the heteroskedasticity effect in the model robust regression was used. The robust regression minimizes the influences of outliers or unusual observations present in the dataset and makes the model more acceptable.

The coefficient of determination (R-squared) resulted at 62.88% which indicates that 62.88% of the variation in the dependent variable, ESG, can be explained by the variation in the independent variables taken for the study. This model, hence, can be deemed fit for our study. The next section describes the results of the regression test that was run.

The main purpose of this study was to determine the impact of corporate governance and financial performance on ESG: comparison of commercial and Islamic banks of Bangladesh. The ESG disclosure in the

regression table shows a negative relationship with firm performance such as revenue and firm's leverage but shows a significant positive relationship with the variables firm size and board size that represents the corporate governance which is on the same line that we found for commercial banks, and it aligns with the findings of previous studies. From this comparison, we can notably conclude that both in commercial and Islamic banks corporate governance plays an important role in influencing ESG disclosure.

Correlation (Financial Performance): Islamic Banks

	ROE	rev	firm size	lev	B_size
ROE	1.0000				
Rev	0.2453***	1.0000			
firm size	-0.2441*	0.9298***	1.0000		
Lev	0.1588**	0.4118***	0.5626***	1.0000	
B_size	-0.2918**	0.3543***	0.4118**	-0.0323	1.0000

(*** represents a 10% significant level, ** represents a 5% significance level, * represents a 1% significance level)

The above table shows the correlation matrix of the 10 Islamic banks which indicates the relation between the dependent variable ROE which is an indicator of financial performance with the independent variables. From the table it can be explained that ROE has a positive correlation with revenue (0.2453) at a 10% significance level, a negative correlation with Firm size (-0.2441) with 1% significance, a positive correlation with lev (0.1588) with 5% significance and a positive relation with B_size (-0.2918) with 5% significance level. The control variable revenue has a positive relationship with firm size (0.9298) at a significance level of 10%, a positive relationship with leverage (0.4118) at a 10% significance level, and with B_size (0.3543) at a significance level of 10%. The independent variable firm size has a positive relation with leverage (0.5626) at a significance level of 10% and with board size (0.4118) at a significance level of 10% which is exactly opposite of what we have found for the commercial banks. Lastly, leverage has a negative relationship with a board size (-0.0323) with no significance. Here it can be noted that the variables of firm size and board size could be considered as the representation of corporate governance and leverage and revenue can be considered as a part of financial performance. The financial indicator ROE has a significant positive relationship with a firm's revenue which means that if revenue increases the financial performance of the firm also increases that is consistent with the findings of prior studies. Increased revenue means that the firm is efficiently utilizing the capital and creating an even greater return which is denoted by the ROE. Without a doubt, ROE and revenue are significantly related. Leverage, on the other hand, has also a positive relationship with the ROE but it is significant for Islamic banks, unlike commercial ones. The amount of leverage a firm has does significantly affect the utilization of the capital and also enhances the process of utilization. The board size having a positive relationship with the ROE means that the decisions that are taken by the directors affect the return somewhat, but it is not significant.

The control variable revenue has a strong positive correlation with the independent variables- firm size, leverage, and board size which is consistent with prior studies. The firm size significantly affects the revenue because larger firms have a wider range of operations which creates larger revenues than smaller firms. In turn, it also increases the return on capital unlike that of a smaller firm. When a firm is big enough the decisions taken by the directors affect the cash flow on a larger scale than that of the small firms which justifies the significant positive relationship between board size and revenue.

The test for multicollinearity was also run. As evident in (Appendix – Table- 3), the mean VIF value is 6.30. This shows that there is no multicollinearity problem, as 6.30 is well within the accepted range of 10.

Regression (Financial Performance): Islamic Banks

ROE	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
rev	0.017774124	0.0174605	-1.00	0.001	-0.0526247	0.0178
Firm size	0.0135511	0.020151	0.6	0.505	-0.0270871	0.0541894
Lev	-0.0011282	0.0012043	-0.94	0.354	-0.0035568	0.00130050
B_size	0.0025081	0.0016984	-1.48	0.014	-0.0059333	0.0009171
_cons	.2131175	0.1888136	1.13	0.265	-0.1676614	0.5938964

A heteroskedasticity test was run to check if the regression has any heteroskedasticity problem (Appendix- Table- 4). As seen in the table, the chi-square value is high, and the p-value is low. This means that it is statistically significant. So, there is a heteroskedasticity problem in the model. To negate the heteroskedasticity effect in the model robust regression was used. The robust regression minimizes the influences of outliers or unusual observations present in the dataset and makes the model more acceptable.

The coefficient of determination (R-squared) resulted at 63.13% which indicates that 63.13% of the variation in the dependent variable, ESG, can be explained by the variation in the independent variables taken for the study. This model, hence, can be deemed fit for our study. The next section describes the results of the regression test that was run.

The main purpose of this study was to determine the impact of corporate governance and financial performance on ESG: comparison of commercial and Islamic banks of Bangladesh. The ROE which is the

indicator of the financial performance of the firm shows a positive relationship with the firm's revenue, leverage, and board size and a negative relation with firm size.

7.0 Discussion and summary of findings

ESG: Commercial Banks

The listed commercial and Islamic banks in Bangladesh have shown a drastic change in the reporting of environmental and social practices. This increase in disclosure level however is not accompanied by an increase in performance. The level of non-performing loans has increased by huge amounts in the period 2015-2019, and NPL has only slightly decreased during the closing quarters of 2020. This is identified as one of the main reasons why despite an increase in ESG disclosures of the banks, their performance declined. This finding proved to be a very insightful one, as it points out the declining performance of the listed commercial banks in Bangladesh, but an increase in ESG disclosure level.

8.0 Conclusion

The study conducted tries to find out the relationship between environmental, social, and governance disclosures and the financial performance of a firm with firm-specific and financial factors. The financial indicators are measured by considering several variables from the financial statements of all the listed banks both private and state-owned in Bangladesh. The banking sector was chosen as the leading industry that introduced the concept of green banking and ESG disclosure to determine the present position where the industry stands from that perspective. This particular topic was chosen because there is a growing concern regarding ESG globally and the concept of ESG is comparatively a new process in third-world countries. Along with the recognition of ESG disclosures by different agencies and regulatory bodies and the growing size of the socially responsible investing market, the idea was to determine how this would affect the banking industry of Bangladesh and how the industry is adapting to the rolling changes of the market and what is their current position. From the analysis of the collected data, it is revealed. The findings for commercial banks showed that ESG has a positive relationship with firm size and board size. Hence, it can be concluded that as the banks grow in size, they ought to disclose more information regarding environmental, social, and governance activities. From a financial perspective in the same study period, it is seen that ROE has shown a positive relationship with leverage and board size. Here, it is evident that as board size increased, so did the disclosure level of ESG, as well as the financial performance of the banks. A clear connection can be drawn, whereby an increase in board size led to increased awareness by the directors to disclose more ESG information, while at the same time, the financial performance of the banks showed an increase too.

The Islamic banks were analyzed next. The findings showed that ESG has a positive relationship with firm size. As firm size increased, so did the ESG disclosures. The next finding showed that as board size increased, so did ESG disclosure levels. There was a positive relationship between ESG disclosure level and board size. These two findings are consistent in commercial banks and Islamic banks. Hence, both categories of banks showed supporting data for the same conclusion. When checked from a financial perspective, Islamic banks showed that ROE has a positive relationship with firm size and board size, along with revenue. Financial performance between commercial and Islamic banks showed similar relationships. The contrasting finding is that for commercial banks, it is seen that leverage showed a positive relationship with financial performance. This finding was not consistent with the findings of Islamic banks, where leverage showed a negative relationship with ROE.

The results from this study have established new findings for the banking industry of Bangladesh such as the financial factors that affect the financial performance of the banks and with this, they can focus on how to manage their resources to reach the peak of financial performance as well as establish a relationship with ESG disclosures effectively. The findings from this study can be used as clear evidence that ESG disclosure level is affected by firm size and board size, which means that as the banks grow in size and the number of directors increases, they tend to become more disclosure aware and disclose more ESG information.

This paper contributes to the existing literature by analyzing a sector that plays a major role in the economy of Bangladesh. A future direction of study to enhance the existing literature can be to incorporate more variables, such as board independence, current ratio, or audit committee independence. The sample size can also be increased, by incorporating all the banks or by considering a larger study period. It is also possible to combine multiple sectors to see if ESG shows consistent growth across sectors.

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Appendix 1 (Commercial Banks)
Table 1

Variable	VIF	1/VIF
rev	1.54	0.648590
Firm size	1.45	0.690260
Lev	1.38	0.722478
B_size	1.27	0.789127
Mean VIF	1.41	

Table 2

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance Variables: fitted values of ESG	
chi2(1) = 19.37	
Prob > chi2 = 0.0000	

Table 3

Variable	VIF	1/VIF
rev	1.54	0.648590
Firm size	1.45	0.690260
Lev	1.38	0.722478
B_size	1.27	0.789127
Mean VIF	1.41	

Table 4

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance Variables: fitted values of ESG	
chi2(1) = 0.90	
Prob > chi2 = 0.3415	

Appendix 2 (Islamic Banks)
Table 1

Variable	VIF	1/VIF
rev	12.64	0.079136
Firm size	9.06	0.110376
Lev	2.03	0.491871
B_size	1.46	0.684794
Mean VIF	6.30	

Table 2

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance Variables: fitted values of ESG	
chi2(1) = 4.25	
Prob > chi2 = 0.0393	

Table 3

Variable	VIF	1/VIF
rev	12.64	0.079136
Firm size	9.06	0.110376
Lev	2.03	0.491871
B_size	1.46	0.684794
Mean VIF	6.30	

Table 4

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance Variables: fitted values of ESG	
chi2(1) = 5.11	
Prob > chi2 = 0.0238	