

Does corporate governance affect environmental reporting?

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Received 28 February 2022
Revised 17 April 2022
19 July 2022
Accepted 1 August 2022

Abstract

Purpose – This study examines, in relation to agency theory, the influence of corporate mechanism on the environmental reporting of banking businesses registered on the Dhaka Stock Exchange (DSE).

Design/methodology/approach – This study was carried out consuming an example of 150 annual reports from 30 banks for the period 2015–2019. Ordinary least squares (OLS) regression was used to investigate the inspiration of corporate governance on the range of inclusive environmental reporting.

Findings – The outcomes reveal that insider equity, board leadership structure, and presence of female directors are statistically significant, while board size and outside directors are insignificant. Furthermore, the results also indicate that the adoption of environmental disclosure among banking businesses in Bangladesh is extra motivated by an increase in the inside skills and moderately the outside acceptability weights. Additionally, there appears to be a supposed lack of stakeholder pressure for environmental disclosure.

Originality/value – The results show that the range of environmental reporting of banking businesses in Bangladesh is good, at an average of 53.90%. It concludes that corporate governance has a substantial inspiration on the range of environmental reporting of banking businesses in Bangladesh.

Keywords Corporate governance, Environmental reporting, Banking companies, Board leadership structure, Female director

Paper type Research paper

1. Introduction

Growing global anxiety for the environment, requests for improved participant reporting, and the importance of comprehensive corporate governance assemblies have prompted the essential for more investigation into the importance of environmental reporting for shareholders and its incorporation into corporate supremacy assemblies (Yook *et al.*, 2017). The recent dynamic variations in the worldwide atmosphere have been an important factor for banking companies in numerous emerging countries like Bangladesh. These changes point to an innovative path in examining responsibility and accountability in the operation of these companies and the impact of their operations on the environment. This miracle has established solid burden on leaders to take into account the community and ecological impact of their strategies. There is indication that securities regulators and those setting accounting standards are progressively conscious of the reputation of being communally and ecologically accountable (Sobhani *et al.*, 2009). Previous studies have been conducted on



this aspect (Acar *et al.*, 2021; Kilincarslan *et al.*, 2020; Hussain *et al.*, 2018; Samahaa *et al.*, 2015; Janggu *et al.*, 2014; Jizi *et al.*, 2014; Allegrini and Greco, 2013; Ntim *et al.*, 2013; Kathyayini *et al.*, 2012; Haji, 2012; Akhtaruddin and Rouf, 2012).

In measuring reporting practices, corporate reporting in Bangladesh is completely measured by numerous rules and guidelines – the Companies Act 1994; Insurance Act 2015; the Banking Companies Act 1991; the Income Tax Order 1984 (for all corporations and public enterprises); Bangladesh Securities and Exchange Commission Order 1969; and the BSEC Rules 1987 (revised in 2016 for all limited companies); and many additional guidelines formed by public sector corporations and other government agencies. A significant governing growth in the capital market in Bangladesh was the primer of the Corporate Governance Ordinance in December 2017, which goals to improve and enhance corporate governance practices in Bangladesh.

Corporate governance is considered a real device to regulate the agency problematic and confirm that the administrator acts in the interests of stakeholders (Ullah *et al.*, 2019). The level of revelation of material is measured to be one of the chief pointers of the level of corporate governance. In Bangladesh, the capital market, which simplifies decent ascendancy and completes the fluidity of the flow of information, is weak. A key aspect of this weakness is that the capital market often does not respond to business performance in terms of higher stock assessments for reporting and low stock prices for the disaster of precise and comprehensive reporting. Consequently, corporations have slight encouragement to list on the stock exchange and are contingent mainly on banks for their funding. Ferdous (2018) opines solid corporate governance as the vital instrument for the growth capital market, which generates trust among stakeholders/depositors, who are then willing to pay a higher price for share, thereby improving a company's ability to increase investment from stock marketplaces. In order to improve in corporate reporting, the Bangladesh Security and Exchange Commission (BSEC) arranged some guidelines in 2017: 1) the members of the board of directors in a company's should not be less than five and more than 20. 2) All corporations should inspire real picture of independent directors on their boards. 3) At least 10% of the total members of the Board must be independent directors, including at least one. 4) The CEO should be separate from the Chairman of the Board. The two positions must rather be held by two dissimilar persons.

The study makes contributions. Unlike previous studies on environmental disclosure in banking firms, which are mainly qualitative in nature, this learning offers practical indication concerning environmental reporting by using archival information. Whereas earlier studies on corporate governance and environmental disclosure have focused primarily on manufacturing companies, our article focuses on the non-manufacturing sector; especially banking businesses. Inclusively, this learning contributes to increasing our level of understanding regarding the position of corporate domination and environmental reporting practices of banking business in Bangladesh.

The main objective of this study is to determine the current status of environmental reporting in Bangladesh subsequently numerous new growths in this regard. To this end, this learning observes the level of environmental reporting of listed banking businesses in Bangladesh's annual reports. The precise aims of this learning are: (1) to identify the nature and extent of environmental reporting made by registered banking businesses in Bangladesh, and (2) to empirically observe the influence of governance mechanism of company on environmental reporting of listed banking businesses in Bangladesh.

2. Literature review

Corporate governance is the system through which companies are run and controlled. It encompasses regulatory and monitoring market mechanisms; the characters and associations among the administrations of the company, its board of directors, its

investors and additional participants; and the objectives for which the corporation is administered. In modern business organization, the key outside stakeholder assemblies are stockholders, creditors, providers, trade creditors, clients and societies affected by the operations of businesses. Inside stakeholders are the panel of managements, administrators and other personnel (Rouf and Hossan, 2020; Rupley *et al.*, 2012; Sharif and Rashid, 2014; Khan, 2010). From this logic, we can simply say that corporate domination and environmental reporting tend to decrease information irregularities between investors and administrators (Ernstberger and Grüning, 2013); though, little thought has been given to linking these two areas of research (Khan *et al.*, 2013).

Agency theory offers a background for linking between corporate governance and environmental reporting, as corporate governance instruments aim to regulate the agency asymmetry and provision the interests of investors and administration in dropping information irregularity (Akhtaruddin *et al.*, 2009; Allegrini and Greco, 2013). Assuming this background, it is advised that the panel of the board has the subsequent inside regulator instrument to supervise administrators (agents) on behalf of stockholders and additional stakeholders (Ben-Amar and McIlkenny, 2015; Rupley *et al.*, 2012; Akhtaruddin *et al.*, 2009; Saïd *et al.*, 2009). From this perspective, this learning mainly goals to amalgamate the corporate governance works and the environmental reporting works by examining the association between corporate governance and the extent of environmental reporting of banking businesses in Bangladesh.

Based on previous literature, five characteristics of the corporate governance board are examined in this study. These are equity held by insiders versus total company equity, board size, board leadership structure, independent directors and women directors. Previous literature associated with these corporate governance variables is revised and propositions about their relationship to the range of environmental reporting are proposed.

2.1 Shares held by insiders and environmental reporting

Insider share is an instrument that aligns the benefits of stockholders and administrators (Acar *et al.*, 2021; Kilincarslan *et al.*, 2020; Akhtaruddin *et al.*, 2009). The concept of agency indicates that when there is different of proprietorship and regulator of a bank, probable agency charges arise due to conflicts of interest among the constricting parties. It is whispered that agency difficulties will be more in broadly held companies due to the various interests of the constricting groups. By using voluntary information, administrators deliver additional material to signal that they are working in the best benefits of stakeholders.

Additionally, agency philosophy directs that organizations with greater administration of insider-held equity may report less information to stockholders through environmental reporting (Farag *et al.*, 2015). Indeed, the determined equity held by insiders reduces the incentive for banks to publish environmental data to meet the requirements of non-isolated groups of shareholders. Acar *et al.* (2021) indicates that higher institutional ownership has a negative effect on environmental disclosure. Akhtaruddin *et al.* (2009) show that a larger part of external proprietorship is completely associated to the level of voluntary reporting. Moreover, Li and Qi (2008) expose that highest administrative proprietorship has a more level of voluntary reporting. Thus, it is expected that the shares held by insiders are likely to influence environmental disclosure. The hypothesis is properly specified as follows:

- H_1 . The proportion of share held by insiders (high-level managers) of a bank is negatively associated with the level of environmental reporting.

2.2 Board size and environmental reporting

The size of the board of directors can be considered as a crucial instrument of corporate governance (Rouf and Hossain, 2018; Amran *et al.*, 2014; Allegrini and Greco, 2013), that can

inspiration the level of voluntary corporate reporting, including environmental reporting (Ntim *et al.*, 2013). Besides, the hypothetical and experimental works delivers conflicting clarifications concerning the association between board size and environmental reporting. In the viewpoint of agency theory, a higher percentage of directors on the board can help monitor efficiency in a firm, because larger boards allow for diversity in terms of expertise and a greater ability to observe administration (Rouf and Akhtaruddin, 2018; Uwuigbe *et al.*, 2011; Larmou and Vafeas, 2010). Moreover, Elzahar and Hussainey (2012) asserted that a large board of directors leads to the inclusion of a greater percentage of directors with financial or accounting training, which has an optimistic inspiration on environment reporting. Reliable with these interpretations, the outcomes of the experimental lessons such as Samaha *et al.* (2015), Janggu *et al.* (2014), Liao *et al.* (2014), Allegrini and Greco (2013), Kathyayini *et al.* (2012) and Akhtaruddin *et al.* (2009) documented a positive relationship between board size and level of disclosure. Additionally, Kathyayini *et al.* (2012) argue that judgments interrelated to the content and level of environmental reporting requires real announcement and harmonization among board members. Due to these explanations, one can expect an adverse association between board size and level of environmental reporting and this argument is maintained by the outcomes of numerous experimental studies, such as Bouaziz (2014) and Uwuigbe *et al.* (2011). On the other hand, a few of the experimental studies have found a negative association between board size and voluntary information (e.g. Amran *et al.*, 2014; Sartawi *et al.*, 2014; Arcay and Vazquez, 2005). Based on these unreliable results from hypothetical and experimental studies, one can expect an optimistic, adverse or no association among board size and the level of environmental reporting. Additionally, it can be thought that with large number of directors, the cooperative understanding and knowledge of the board inclines to growth and, consequently, the essential for reporting information becomes higher. Since these explanations, the succeeding hypothesis is derived:

H₂. There is an optimistic association between board size and level of environmental reporting.

2.3 Board leadership structure and environmental reporting

In the framework of corporate governance, the fundamental question repeatedly discussed is whether the positions of CEO and chairman of the board of directors must be apprehended by dissimilar persons (double administration assembly) or by single person (unitary assembly). Rendering to agency concept, the unitary headship assembly can meaningfully weaken the maximum important functions of the board of directors, namely to monitor, discipline and compensate senior management. It also allows the CEO to occupy in resourceful performance due to his supremacy over the panel. Husted and Sousa-Filho (2019) showed an adverse association between the dual management assembly and environmental reporting. On the other hand, Hussain *et al.* (2018) and Samahaa *et al.* (2015) found an optimistic relationship between the dual management assembly and environmental reporting. Thus, it is projected that the dual management assembly may encouragement the level of environmental reporting. These explanations propose the succeeding hypothesis:

H₃. A company's dual management assembly is absolutely associated to the level of environmental reporting.

2.4 Independence director and environmental reporting

Additional key corporate governance tool that is commonly observed in the environmental reporting literature is independence director (Amran *et al.*, 2014; Khan *et al.*, 2013). A panel is normally formulated of privileged directors and independent director. Privileged directors are nominated from among the decision-making officers of a corporation. They either belong

to the administration group or are the family members that owner of the organization. Independent directors are memberships whose only attachment with the corporation is their managerial position. Independent directors are more real than privileged directors in exploiting stakeholders' prosperity (Sharif and Rashid, 2014; Mohamad and Sulong, 2010). Consequently, from an agency philosophy viewpoint, it is generally recognized that as the percentage of independent director on the board, the effectiveness of the board in governing and monitoring administration also rises (Liao *et al.*, 2014; Jizi *et al.*, 2014). Moreover, it is too claimed that as independent directors are fewer joined to administration, they may occupation as a harmonizing tool to safeguard that corporations act in the greatest benefits of stockholders, other participants and humanity (Jizi *et al.*, 2014; Sharif and Rashid, 2014). After this point of understanding, independent directors may inspire businesses to report supplementary information to the outside participants. These hypothetical influences, the outcomes of experimental studies normally show that the percentage of independent directors has an optimistic influence on voluntary information, including environmental reporting (Cai *et al.*, 2014; Jizi *et al.*, 2014; Sharif and Rashid, 2014; Khan *et al.*, 2013; Allegrini and Greco, 2013). Based on academic clarifications and experimental outcomes, the succeeding hypothesis is projected:

H₄. There is an optimistic association between the percentage of independent directors on the board and the level of environmental reporting.

2.5 Female director and environmental reporting

Agreed that females and males generally originate from genealogically, ethnically and informally different circumstances, a female director on the board was seen as a significant measure of corporate governance that can encouragement the level of environmental reporting (Ben-Amar and McIlkenny, 2015; Liao *et al.*, 2014). Barako and Brown (2008) specified that a bigger percentage of females on the board of directors lead to well business announcement. On the other hand, Liao *et al.* (2014) privilege that female directors are more passionate and vocal when it comes to making their voices heard by men in society. Agency theory can clarify the constructive outcome of gender diversity on environmental disclosure. Agency theory highlights the board's role in supervising and regulating administrators and recommends that mixed boards can assistance reduce agency difficulties between administrators and investors. It is certain that female directors are more likely to increase extra inquiries than other directors, and might also be extra dynamic and harsh organizers (Boubaker *et al.*, 2014). Consistent with these opinions, Rupley *et al.* (2012) recognized an optimistic association between the percentage of female directors on the board and environmental reporting. Additionally, Ben-Amar and McIlkenny (2015) and Frias Aceituno *et al.* (2013) report an optimistic association between the percentage of female directors on the board and the level of environmental reporting. Thus, the proposition of the learning is expressed as shadows:

H₅. There is an optimistic association between the percentage of female directors on the board and the level of environmental reporting.

3. Methodology

3.1 Sample

The example for our learning was drawn since the yearly reports of banking businesses recorded on the Dhaka Stock Exchange (DSE). Thirty banking corporations were registered on the DSE, and all were included in this study (Appendix).

3.2 Variables

3.2.1 Dependent variable. The 150 annual reports of 30 experimented banks for the period from 2015 to 2019 are examined by univariate and multivariate study to measure the level of environmental reporting of banking corporation in Bangladesh. We used an unweighted method for this learning. This method is the utmost suitable because all the variables considered here are the only sample considered and are not representative of a certain population (Akhtaruddin *et al.*, 2009). Information items are scored mathematically on a dichotomous source. Under the unweighted method, a corporation is valued “1” for an element reported in the yearly report and “0” if it is not reported. The total reporting index (TRI) is then calculated for respective bank of examples as a percentage of the total reporting score to the maximum reporting probable by the bank. The reporting index of individual bank is then articulated as a proportion (Table 1).

3.2.2 Independent variables. Table 2 précises how the independent variables are measured in this learning.

3.3 Estimation method

A regression analysis was performed to exam the relationship between corporate governance elements and environmental reporting. The deterioration model is shown underneath. In this model, *i* represents irritable sections and *t* means time series data. This investigation offers the use of normal data. ERI (*Sus*) means the general environmental reporting index as the dependent variable, β means a coefficient in the deterioration model and the element of the independent variables is stated upstairs. In order to investigate the association between corporate governance and the level of environmental reporting and to test the legitimacy of the aforementioned propositions, the succeeding ordinary least squares (OLS) deterioration model with cross-sectional information was projected:

$$\text{ERLi} = \alpha_0 + \beta_1 \text{SHLi} + \beta_2 \text{BSIZEi} + \beta_3 \text{BLSi} + \beta_4 \text{INDi} + \beta_5 \text{FDi} + \beta_6 \text{ROSi} + \beta_7 \text{ROAi} + \beta_8 \text{TSi} \\ + \beta_9 \text{TAi} + \epsilon_i.$$

4. Outcomes and argument

4.1 Descriptive statistics

Table 3 offerings the descriptive information. The results of the reporting index show that the average level of environmental reporting in the banking corporations in the sample is 53.90%. The maximum score obtained by a bank is 75% and the lowermost score is 38.57%, with a standard deviation of 14.34%. Banks are commonly split when it comes to environmental reporting. The percentage of share held by insiders to all equity in the company is 39.83, with a standard deviation of 18.73. The normal board size is 17.52, with lowest and highest sizes of 10 and 20, exclusively. The average board leadership structure is 0.69 with a standard deviation of 0.46. The average ratio of independent directors on the board is 10.76%, with a standard deviation of 6.08%. The mean proportion of female directors out of the total number of directors on the board is 13.04, with a standard deviation of 15.21. The average proportion ROA and ROS are 6.71 and 11.06, correspondingly, with a standard deviation of 7.40 and 17.12, respectively. Moreover, the average company size is Tk and Tk 2,477,341.55 lakh and 158,038.03 lakh in terms of total assets and total sales, respectively.

4.2 The trend of environmental disclosure in the sample banks

Figure 1 displays that the averages of environmental reporting elements of registered banking corporations are 46.18% in 2015, 48.52% in 2016; 53.58% in 2017; 56.46% in 2018

Items	Measurements
1. Formulation of green policies and strategies	Long and short-term strategies for emissions and carbon footprint, environmental protection, temperature transformation and worldwide cautionary, weather alteration change and justification, energy efficiency, renewable energies; environmental guidelines and sectoral tactical forecasting; creation of a green funding component, a committee at administrator level
2. Ecological risk supervision	Assess probable causes of risk prior to praise agreement, develop and update credit risk policy, audit procedures and reporting format taking into account ecological and weather risks; the introduction of ecological due industry
3. Green financing	Encourage investment in renewable energy schemes, fresh water schemes, wastewater handling and management, compact and harmful waste removal plants, as well as innovation and green and environmental technologies
4. Climate change risk management fund	Statement on climate change, global warming and vulnerability; responsibility for weather change; construction and use of a temperature transformation trust in case of floods, cyclones and droughts; securing more climate finance for helpless parts and divisions
5. Green workplace supervision	Energy custom, savings and productivity; power consumption and savings; gas and petroleum and savings; water drinking and saving; less paper; double-sided use of paper; eco-printing; use solar energy; green workplace; decrease corporate travel
6. Green invention and promotion	Online finance, mobile funding, SMS funding, Internet investment, video conferencing, virtual conferences, electronic statements, online clearinghouses, online marketing and telephone selling, email resources
7. Stakeholder training and consciousness	Community awareness, investor awareness and customer alertness of ecological, air and water pollution; use of renewable energy sources, planting of trees, use of energy efficient vehicles; regular employee training; the introduction of green days and green events
8. Innovative Green concept and technology	Transfer of technology, investment in green technologies, mobilization of resources through technology, transfer of funds, establishment of ATMs, research and development
9. Green reports and disclosure	Quarterly, half-yearly and annual reporting of the green bank; disclose particulars of ecological initiatives; provide sufficient information on the use of funds for climate risk and green finance; use stand-alone sustainability reports; restructured website concerning green reporting and yearly report
10. Internationalization green reporting standards	Use of globally recognized reporting standards, compliance with GRI rules, green disclosure ensured by third-party confirmation and introduction of community and ecological checking
11. Reward and motivation	Position of the top 10 green banks, ease of risk score, optimistic influence on CAMEL score; open new twigs; CSR score; tax advantage; circulate the Green Bank symbol

Table 1.
Disclosure items

and 64.76% in 2019. Overall, environmental disclosure elements trended upward over the review period.

4.3 Correlation matrix

Table 4 presents the product-moment association coefficients of the continuous instructive variables as well as the dependent variable. Pearson's product-moment correlation outcome revealed that the proportion of share held by insiders out of all bank equity was undesirably

associated to BLS and FD ($p < 0.05$, two-sided). TA, PFD, BLS and BSIZE were found to be absolutely associated to environmental reporting ($p < 0.01$, two-sided), but the proportion of equity held by insiders relative to the bank's total equity was found to be undesirably associated to environmental reporting ($p < 0.01$, two-sided). Moreover, TS, ROS and BSZE were absolutely associated to TA ($p < 0.01$, two-sided). ROA is absolutely associated to ROS ($p < 0.01$, two-sided).

Variables	Code	Measure
Shares held by insiders	SHI	Shares held by insiders as a proportion of all company equity
Board size	BSIZE	Total number of directors on a bank's board
Board leadership assembly	BLS	1 for dual, or 0 non-dual
Independence director	IND	The percentage of independent directors on a bank's board of directors
Female director	FD	The percentage of female directors on a bank's board of directors
Return on sales	ROS	Percentage of after-tax net profit on a company's total sales
Return on assets	ROA	Percentage of after-tax net profit on a company's total assets
Total assets	TA	Total assets of a bank
Total sales	TSE	Total sales of a bank

Table 2. Summary of independent and control variables

Variables	Minimum	Maximum	Mean	Standard deviation
ED (%)	38.57	75.00	53.90	14.34
SHI (%)	1.32	87.08	39.83	18.73
BSIZE	10.00	20.00	17.52	3.75
BLS	0.00	1.00	0.69	0.46
IND (%)	0.05	20.00	10.76	6.08
FD (%)	0.00	60.00	13.04	15.21
ROS (%)	0.09	96.25	11.06	17.12
ROA (%)	0.08	40.39	6.71	7.40
TS(Lakh)	45,616.84	529,420.89	158,038.03	84,942.70
TA (Lakh)	122,577.20	7,976,996.56	2,477,341.55	1,254,779.81

Note(s): * SHI = Share held by insiders for all aspects of the integrity of the company; BSZE = BoSrd Size; BLS = Board Leadership Structure; IND = Independent Directors; FD = Female Leader; ROS = Return on Sales, ROA = Return on Assets; TS = Total Sales; TA = Total Assets

Table 3. Statistics descriptive

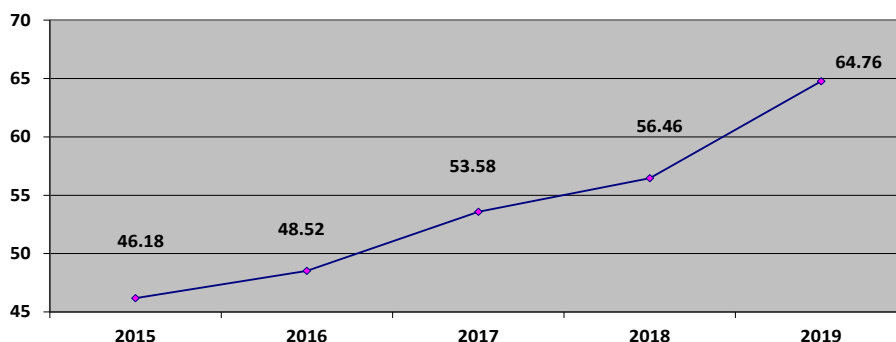


Figure 1. Environmental disclosure score (%)

Table 4.
Correlation matrix

Variables	TVD	PEOI	BSZE	BLS	PIND	PFDD	ROS	ROA	TS	TA
ED	1.000									
SHI	-0.523**	1.000								
BSZE	0.288**	-0.169	1.000							
BLS	0.382**	-0.214*	0.235*	1.000						
IND	0.013	0.024	-0.224*	-0.021	1.000					
FD	0.287**	-0.194*	0.078	0.164	0.147	1.000				
ROS	0.129	-0.075	0.145	0.041	-0.187	-0.071	1.000			
ROA	0.043	-0.014	0.126	0.050	0.101	-0.052	0.430**	1.000		
TS	0.185	-0.131	0.186	0.001	0.012	-0.143	-0.016	0.187	1.000	
TA	0.377**	-0.043	0.272**	0.066	-0.052	-0.107	0.257**	-0.011	0.514**	1.000

Note(s): ** Correlation is significant at the 0.01 level (two-tailed)
* Correlation is significant at the 0.05 level (two-tailed)
* SHI = Share held by the insiders to all equity of the firm; BSZE = Board Size; BLS = Board Leadership Structure; IND = Independent Directors; FD = Female Directors; ROS = Return on Sales, ROA = Return on Assets; TS = Total Sales; TA = Total Assets

4.4 Regression analysis

Table 5 shows R-squared coordination coefficient, beta coefficients, F-ratio, and t-statistics for the regression model and the summary results of the dependent variable on the independent variables. The outcomes indicate an F value of 11.312 and an R-squared of 0.516, which are important at the 0.000 level. Both values show that a higher proportion of the difference in environmental reporting can be explicated by deviations in all of the explanatory variables.

In addition, insider share is the very important corporate governance elements. If the property structure of the independent variable is improved by single part, the dependent variable will also rise by -0.416 , Beta t value = -5.430 , with $SE = 0.057$, and significance at the 0.001 level ($p < 0.01$, two-tailed). This outcome specifies that suggestion H_1 – the proportion of share held by insiders (high level administration) of a corporation is negatively connected with the level of environmental reporting. This result is similar to that of *Acar et al. (2021)*, *Farag et al. (2015)*, *Akhtaruddin et al. (2009)*.

The leadership structure on the board of directors is another significant variable in corporate governance. The deterioration coefficient of the variable is 0.220, which is optimistic and statistically important at the 0.004 level ($p < 0.01$, two-tailed). This outcome shows that a corporation's double administration assembly is absolutely associated to the level of environmental reporting. This result is also comparable to that of *Hussain et al. (2018)* and *Samahaa et al. (2015)*.

In addition, the proportion of female director on the board of all directors is a significant variable of corporate governance. If the explanatory variable percentage of the female directors (PFD) is enlarged by single element, then in this condition of the measured variable is also enlarged by 0.213, with $SE = 0.075$, t beta value = 2.815 and significance at the level of 0.006 ($p < 0.01$, two-tailed). The outcome specifies that the proportion of female directors on the total number of directors on a bank's board of directors is absolutely connected with the

Variables	Coefficient	Standard error	Beta t values	p value
SHI (%)	-0.416	0.057	-5.430	0.000***
BSZE	0.050	0.654	0.622	0.536
BLS	0.220	2.342	2.915	0.004***
IND (%)	0.027	0.183	0.346	0.730
FD (%)	0.213	0.075	2.815	0.006***
ROS (%)	-0.024	0.076	-0.264	0.792
ROA (%)	0.048	0.171	0.542	0.589
TS	-0.061	0.000	-0.655	0.514
TA	0.390	0.000	4.118	0.000***
R Square	0.516			
Adjusted R square	0.470			
F value	11.312			
p Value	0.000			

Note(s): * $p < 0.1$, two-tailed; ** $p < 0.05$, two-tailed; *** $p < 0.01$, two-tailed

SHI = Share held by insiders to an all equity share bank

BSZE = Total number of members on each board

BLS = Board leadership structure, 1 for dual or 0 for non-dual

IND = Proportion of independent directors to the total directors on board

FD = Proportion of female directors to the total directors on board

ROS = Net profit after taxes to the total sales of a bank

ROA = Net profit after taxes to the total assets of a bank

TS = Total sales of a bank

TA = Total assets of a bank

Table 5.
Regression analysis

level of environmental reporting, accordingly supporting H₅. This outcome is comparable to Kilincarslan *et al.* (2020), Liao *et al.* (2014) and Frias Aceituno *et al.* (2013).

If the controllable variable TA is enlarged by single element, the dependent variable will also rise by 0.390, beta *t* value = 4.118, with SE = 0.000 and significance at the level 0.000. The outcome shows that the TA of a bank is absolutely connected with the level of environmental reporting.

5. Conclusion

This research learning observed the outcome of corporate governance on environmental reporting of DSE registered banking corporations in Bangladesh. The level of environmental reporting is the dependent variable of the learning. Yearly reports of exemplified banks for the time 2015 to 2019 were examined by univariate and multivariate study to identify the level of environmental reporting of banking corporations in Bangladesh. In addition, the characteristics of corporate governance were measured as an independent variable that may have an association with the level of environmental reporting of banking corporations, specifically the share held by top management, the number of directors, the independent director, the administration assembly of the directors and the female director. OLS deterioration systems were used to examine the inspiration of corporate governance on the level of general environmental reporting. The outcomes of the study indicate that insider equity, board management assembly, and proportion of female directors are statistically significant at the 1%, 5% and 10% levels, which is comparable to Acar *et al.* (2021), Farag *et al.* (2015), Akhtaruddin *et al.* (2009), Hussain *et al.* (2018), Samahaa *et al.* (2015) and Kilincarslan *et al.* (2020). In dissimilarity, board size and independent directors are statistically insignificant at the 1%, 5%, and 10% levels. The results also show that the level of environmental reporting of banking corporations in Bangladesh is good, at a normal of 53.90%. It concludes that corporate governance has an important inspiration on the level of environmental reporting of banking corporations in Bangladesh.

Like most empirical studies, this learning has boundaries. First, the example was drawn only from registered banking corporations and eliminates other types of financial companies. Consequently, the decisions of the learning may not apply to all corporations registered in Bangladesh. Forthcoming investigation could examine the level of reporting for financial and manufacture other businesses. Second, in the learning, the environmental reporting index was arranged using the material provided by the particular corporations in their yearly reports. So, the reporting index as well as the outcomes of the learning may be affected if the material given in the yearly reports has been deployed by the corporations. Third, the learning only discovered five explanatory variables; additional aspects also manipulating environmental reporting, such as external shareholders, recognized shareholders, board audit committee, experience of the director and auditor opinion may be discovered in future learning, thus producing more robust results.

References

- Acar, E., Tunca Çalyurt, K. and Zengin-Karaibrahimoglu, Y. (2021), "Does ownership type affect environmental disclosure?", *International Journal of Climate Change Strategies and Management*, Vol. 13, pp. 120-141.
- Akhtaruddin, M., Hossain, M.A., Hossain, M. and Yao, L. (2009), "Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms", *Journal of Applied Management Accounting Research*, Vol. 7 No. 1, pp. 1-19.
- Akhtaruddin, M. and Rouf, M.A. (2012), "Corporate governance, cultural factors, and voluntary disclosure: evidence from selected companies in Bangladesh", *Corporate Board: Role, Duties & Composition*, Vol. 8, pp. 46-58.

- Allegrini, M. and Greco, G. (2013), "Corporate boards, audit committees and voluntary disclosure: evidence from Italian listed companies", *Journal of Management & Governance*, Vol. 17, pp. 187-216.
- Amran, A., Lee, S.P. and Devi, S.S. (2014), "The influence of governance structure and strategic corporate social responsibility toward sustainability reporting quality", *Business Strategy and the Environment*, Vol. 23, pp. 217-235.
- Arcay, M.R.B. and Vazquez, M.F.M. (2005), "Corporate characteristics, governance rules and the extent of voluntary disclosure in Spain", *Advances in Accounting*, Vol. 21, pp. 299-331.
- Barako, D.G. and Brown, A.M. (2008), "Corporate social reporting and board representation: evidence from the Kenyan banking sector", *Journal of Management & Governance*, Vol. 12, pp. 309-324.
- Ben-Amar, W. and McIlkenny, P. (2015), "Board effectiveness and the voluntary disclosure of climate change information", *Business Strategy and the Environment*, Vol. 24, pp. 704-719.
- Bouaziz, M.Z. (2014), "Corporate governance and voluntary financial disclosure by Canadian listed firms", *Management Review: An International Journal*, Vol. 9, pp. 44-69.
- Boubaker, S., Dang, R. and Nguyen, D. (2014), "Does board gender diversity improve the performance of French listed firms?", *Gestion 2000*, Vol. 31, pp. 259-269.
- Cai, Y., Dhaliwal, D.S., Kim, Y. and Pan, C. (2014), "Board interlocks and the diffusion of disclosure policy", *Review of Accounting Studies*, Vol. 19, pp. 1086-1119.
- Elzahar, H. and Hussainey, K. (2012), "Determinants of narrative risk disclosures in UK interim reports", *The Journal of Risk Finance*, Vol. 13, pp. 133-147.
- Ernstberger, J. and Grüning, M. (2013), "How do firm-and country-level governance mechanisms affect firms' disclosure?", *Journal of Accounting and Public Policy*, Vol. 32, pp. 50-67.
- Farag, H., Meng, Q. and Mallin, C. (2015), "The social environmental and ethical performance of chinese companies: evidence from the Shanghai Stock Exchange", *International Review of Financial Analysis*, Vol. 42, pp. 53-63.
- Ferdous, C.S. (2018), "Corporate governance in Bangladesh: evidence of compliance", *International Business Research*, Vol. 11, pp. 88-109.
- Frias-Aceituno, J.V., Rodriguez-Ariza, L. and Garcia-Sanchez, I.M. (2013), "The role of the board in the dissemination of integrated corporate social reporting", *Corporate Social Responsibility and Environmental Management*, Vol. 20, pp. 219-233.
- Haji, A.A. (2012), "The trend of CSR disclosures and the role of corporate governance attributes: the case of Shari'ah compliant companies in Mala", *Issues in Social & Environmental Accounting*, Vol. 6, pp. 68-94.
- Hussain, N., Rigoni, U. and Orij, R.P. (2018), "Corporate governance and sustainability performance: analysis of triple bottom line performance", *Journal of Business Ethics*, Vol. 149, pp. 411-432.
- Husted, B.W. and Sousa-Filho, J.M. (2019), "Board structure and environmental, social, and governance disclosure in Latin America", *Journal of Business Research*, Vol. 102, pp. 220-227.
- Janggu, T., Darus, F., Zain, M.M. and Sawani, Y. (2014), "Does good corporate governance lead to better sustainability reporting? An analysis using structural equation modeling", *Procedia-Social and Behavioural Sciences*, Vol. 145, pp. 138-145.
- Jizi, M.I., Salama, A., Dixon, R. and Stratling, R. (2014), "Corporate governance and corporate social responsibility disclosure: evidence from the US banking sector", *Journal of Business Ethics*, Vol. 125, pp. 601-615.
- Kathyayini, K., Tilt, C.A. and Lester, L.H. (2012), "Corporate governance and environmental reporting: an Australian study", *Corporate Governance*, Vol. 12, pp. 143-163.
- Khan, H.U.Z. (2010), "The effect of corporate governance elements on corporate social responsibility (CSR) reporting: empirical evidence from private commercial banks of Bangladesh", *International Journal of Law and Management*, Vol. 52, pp. 82-109.

- Khan, A., Muttakin, M.B. and Siddiqui, J. (2013), "Corporate governance and corporate social responsibility disclosures: evidence from an emerging economy", *Journal of Business Ethics*, Vol. 114, pp. 207-223.
- Kilincarslan, E., Elmagrhi, M.H. and Li, Z. (2020), "Impact of governance structures on environmental disclosures in the Middle East and Africa", *Corporate Governance*, Vol. 20, pp. 739-763.
- Larmou, S. and Vafeas, N. (2010), "The relation between board size and firm performance in firms with a history of poor operating performance", *Journal of Management & Governance*, Vol. 14, pp. 61-85.
- Li, H. and Qi, A. (2008), "Impact of corporate governance on voluntary disclosure in Chinese listed companies", *Corporate Ownership Control*, Vol. 5 No. 2, pp. 360-366.
- Liao, L., Luo, L. and Tang, Q. (2014), "Gender diversity, board independence, environmental committee and greenhouse gas disclosure", *The British Accounting Review*, Vol. 47, pp. 409-424.
- Mohamad, W.I.A.W. and Sulong, Z. (2010), "Corporate governance mechanisms and extent of disclosure: evidence from listed companies in Malaysia", *International Business Research*, Vol. 3, pp. 216-228.
- Ntim, C.G., Lindop, S. and Thomas, D.A. (2013), "Corporate governance and risk reporting in South Africa: a study of corporate risk disclosures in the pre-and post-2007/2008 global financial crisis periods", *International Review of Financial Analysis*, Vol. 30, pp. 363-383.
- Rouf, M.A. and Akhtaruddin, M. (2018), "Factors affecting the voluntary disclosure: a study by using smart PLS-SEM approach", *International Journal of Law and Management*, Vol. 60, pp. 1498-1508.
- Rouf, M.A. and Hossain, M.S. (2018), "Ownership distribution and value of the banks in Bangladesh", *International Journal of Managerial and Financial Accounting*, Vol. 10, pp. 378-390.
- Rouf, M.A. and Hossain, M.A. (2020), "The effects of board size and board composition on CSR disclosure: a study of banking sectors in Bangladesh", *International Journal of Ethics and Systems*, Vol. 37, pp. 105-121.
- Ruple, K.H., Brown, D. and Marshall, R.S. (2012), "Governance, media and the quality of environmental disclosure", *Journal of Accounting and Public Policy*, Vol. 31, pp. 610-640.
- Said, R., Hj Zainuddin, Y. and Haron, H. (2009), "The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies", *Social Responsibility Journal*, Vol. 5, pp. 212-226.
- Samaha, K., Khlif, H. and Hussainey, K. (2015), "The impact of board and audit committee characteristics on voluntary disclosure: a meta-analysis", *Journal of International Accounting, Auditing and Taxation*, Vol. 24, pp. 13-28.
- Samahaa, K., Khlif, H. and Hussainey, K. (2015), "The impact of board and audit committee characteristics on voluntary disclosure: a meta-analysis", *Journal of International Accounting, Auditing and Taxation*, Vol. 24, pp. 13-28.
- Sartawi, I.I.M., Hindawi, R.M., Bsoul, R. and Ali, A.E.J. (2014), "Board composition, firm characteristics, and voluntary disclosure: the case of Jordanian firms listed on the Amman Stock Exchange", *International Business Research*, Vol. 7, pp. 67-82.
- Sharif, M. and Rashid, K. (2014), "Corporate governance and corporate social responsibility (CSR) reporting: an empirical evidence from commercial banks (CB) of Pakistan", *Quality & Quantity*, Vol. 48, pp. 2501-2521.
- Sobhani, F.A., Amran, A. and Zainuddin, Y. (2009), "Revisiting the practices of corporate social and environmental disclosure in Bangladesh", *Corporate Social Responsibility and Environmental Management*, Vol. 16, pp. 167-183.
- Ullah, M.S., Muttakin, M.B. and Khan, A. (2019), "Corporate governance and corporate social responsibility disclosures in insurance companies", *International Journal of Accounting and Information Management*, Vol. 27, pp. 284-300.

Uwuigbe, U.N., Egbide, B.C. and Ayokunle, A.M. (2011), "The effect of board size and board composition on firm's corporate environmental disclosure: a study of selected firms in Nigeria", *Acta Universitatis Danubius*, Vol. 7, pp. 164-176.

Yook, K.H., Song, H., Patten, D.M. and Kim, I.W. (2017), "The disclosure of environmental conservation costs and its relation to eco-efficiency: evidence from Japan", *Sustainability Accounting, Management and Policy Journal*, Vol. 8, pp. 20-42.

Appendix

SN	Name of banks
1	Al-Arafah Islami Bank Ltd
2	AB bank ltd
3	Brac bank ltd
4	Bank Asia ltd
5	City bank ltd
6	Dhaka Bank Ltd
7	Dutch-bangla bank ltd
8	Exim bank ltd
9	Eastern bank ltd
10	First security Islamic bank ltd
11	IFIC bank ltd
12	ICB islami bank ltd
13	Islami bank Bangladesh ltd
14	Jamuna bank ltd
15	Mercantile bank ltd
16	Mutual trust bank ltd
17	NCC bank ltd
18	National bank ltd
19	One bank ltd
20	Premier bank ltd
21	Prime bank ltd
22	Pubali bank ltd
23	Rupali bank ltd
24	Social islami bank ltd
25	Shahjalal islami bank ltd
26	Southeast bank ltd
27	Standard bank ltd
28	Trust bank ltd
29	Uttara bank ltd
30	UCB bank ltd

Table A1.
Sample banks

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