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CAN GREEN BANKING THRIVE IN DEVELOPING ECONOMIES? A CONTEXTUAL STUDY ON BANGLADESH

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Abstract *Purpose – This paper aims to investigate the impact of climate risk funds (CRF), as a moderator variable, on the association between green banking investment (GBI) and financial performance. Design/Methodology/Approach – The research has used secondary data from banks' audited annual reports. The data has been analysed using SPSS version 26 for validating the results. Findings – The findings generated from the data indicate that there is a significant relationship between GBI and financial performance. In addition to that, this relation becomes positively more assertive in the presence of CRF. Originality – This study is one of the first attempts to investigate the causality relationships and the moderating impact of CRF on the relationship between GBI and financial performance in the context of a developing country. Practical Implications – The findings indicate that the demand for green business has increased in developing countries, which facilitates the higher demand for GBI; this has an impact on EPS, which shows the shareholders' concern towards environmentally friendly banking practices.*

Keywords: *Bangladesh, Climate Risk Fund, CSR, EPS, Financial Performance, Green Banking*

INTRODUCTION

Since the mid-twentieth century, global warming and natural calamities have become an alarming issue, and the necessity of adopting a cleaner production has become inevitable. An extraordinary amount of air and water pollution from immense industrial chemical discharges, led by the emergence of mass production, is one of the main reasons for this negative shift in the environment (World Bank Group, 2019). This concern is globally spreading among governments, businesses, and the public, for preserving the environment and concentrating on sustainable development, including to what extent it is affected by economic activities. In 2018, carbon emissions from fossil fuel use hit a record high, after energy demand grew at its fastest pace, reflecting higher consumption in the United States, China, India, and so forth (World Health Organization, 2019). According to IEA (2018), energy demand grew 2.3 per cent, which is the most in a decade; it resulted in a record 33 gigatons of carbon emissions, which is 1.7 per cent higher than in 2017. Furthermore, WHO estimates that around 4.2 million people die every year because of breathing polluted air (World Health Organization, 2019). These indicators are screaming the urgent need to control pollution and to protect the environment.

However, putting full blame on industrialisation would be an oversimplification and biased. Over time, non-manufacturing industries have grown to be the mainstream economic drivers, from small support services; for example, global international tourism revenue has doubled since 2005, and in 2018, added a record $8.8 trillion to the world economy. The non-manufacturing industries, such as the banking industry, the technology service industry, or the tourism industry, are contributing their fair share to environmental pollution. Compared to the manufacturing sector, pollution in the non-manufacturing sectors takes place differently. For instance, the carbon dioxide released by air conditioners, or wasting a vast amount of paper, and most importantly, e-waste, have all been estimated to be around 50 million tons each year (Baldé et al., 2017).

In the Paris Agreement, 125 countries agreed to achieve the global temperature rise below 2 degrees Celsius; to achieve this target, the necessity of having an environment-friendly policy in financial institutions has been focused firmly on the agreement (Cifci & Oliver, 2018). Such drive has enabled the formation of a Green Climate Fund (GCF) to facilitate the development of climate-friendly technology and to contribute in reducing the carbon footprint by financial institutions (Schalatek et al., 2012). Financial institutions, more specifically banks, play a vital role in global warming in

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this globalised world, as their financing activity has enabled the enhancement of industrialisation and modernisation. To achieve the success of this agreement, the activity of the banking industry requires reformation, which has triggered the faster implementation of environmental banking.

Nevertheless, the picture is the same in Bangladesh. The financial market of Bangladesh is highly dependent on banking institutions, because the bond markets and the share markets still have not developed like in the first-world countries (Islam, 2019). Due to the lack of availability of various financial instruments, the dependency on banking institutions is highly noticeable. Sixty scheduled banks are operating all over the country. The necessity of having an environmental banking policy was realised long ago, and Bangladesh Bank, the state bank of Bangladesh, introduced a green banking policy in 2011 (Bangladesh Bank, 2017). The purpose of this policy is to influence the banking activities and procedures towards achieving sustainability by overcoming climate change obstacles.

This paper has been structured in the following segments. The next section has covered the philosophical base and theoretical background of the study, followed by details of literature on green banking activities in Bangladesh and around the globe. Then, the development of the hypothesis, research methods, data analysis, results, and findings have been discussed, aiming to explore the underlying relation between investments in green banking practices by banks and financial performance. Followed by this, limitations, future research directions, and the conclusion has been presented to give a clear picture of the paper.

Philosophical Base

According to McGuinness (2013), the idea of causality and positivism evolve around these characteristics:

- Causes and effects are contiguous in space and time.
- The cause precedes the effect.
- There is a constant regularity such that, whenever the cause occurs, the effect occurs as well.

Research question and hypotheses have been designed in such a way in positivism that empirical tests can be used to verify propositions through careful control to avoid the influence of outcome. The researcher plays an independent role while observing the world and is skilled enough not to be influenced by or influence the reality in the process of research (Van & Andrew, 2007). Studying green banking and financial performance is a study about the causality of how different environmentally concerning banking activities can influence the efficiency of a bank's financial performance, and how different factors can work together to ensure a better environmental and financial performance. This research is going to be an empirical research using the secondary database to explore the relationship between green banking activities and financial performance. The researcher will play a passive role and cannot influence the data collection process in any possible way. Therefore, this research will fit into the philosophical paradigm of positivism.

Theoretical Background

To build up a context to test the causality, a versatile range of theories can be used. The use of theory in empirical research works, as these are lenses through which investigators try to see the existence of reality. Different theories can be used as the lens for this research; however, the best fit for explaining this research is the stakeholders' theory (Freeman, 1984).

Stakeholder theory focuses on the relationship between an organisation and its stakeholders. A stakeholder is any group or individual who can affect or is affected by the activities of a firm. Therefore, firms' actions and strategies need to be aligned with stakeholders' interests (Freeman, 1984). The stakeholder perspective emphasises that an organisation must meet various stakeholders' (such as shareholders, community stakeholders, and regulatory stakeholders) expectations (Guthrie et al., 2006). Moreover, this theory also focuses on the accountability an organisation must have beyond considering only financial benefits (Guthrie et al., 2006). This performance indicates that stakeholders' and firms' dependencies can go both ways. The firm's strategy can influence stakeholders; at the same time, stakeholders' interests can redirect the firm's strategies.

Legitimacy theory, on the other hand, explains that a social contract exists between the organisation and its respective societies (Deegan 2006; Deegan & Samkin, 2009). Theoretically, businesses focus on improving green operational strategies to enhance environmental performance, which is part of a social contract. Furthermore, this theory has a clear precedent of use in disclosure of a firm's practices that are based on social contracts. It is possible to use legitimacy theory to explain the firm's social role towards stakeholders; however, that theory is not significantly useful in the area of Corporate Social Responsibility (CSR) disclosure (Gray et al., 2009). Therefore, in this research context, stakeholder theory can provide a better perspective.

Furthermore, stakeholder theory has a strong connection with the resource-based view (Barney, 1991), which will also help explain the strategic and competitive advantage perspective of a firm's concern towards environmental performance. This proposed research has advocated the profound question of business performance improvement, which can be affected by green banking strategies. The core

indicators used here to test the relationship are all related to the firm's accountability towards different stakeholders for protecting the environment. Therefore, using the stakeholder theory as the theoretical foundation will be the most suitable way to guide and design this research project.

LITERATURE REVIEW

It has always been considered a universal challenge to make a bridge between economic and sustainable development and to align their growth (Ramesh, 2019). To build this bridge, financial institutions need to play a central role (Volz, 2018). Green financing addresses this issue of environmental sustainability. It is a global initiative where financing of investments does not only consider the returns, but also focuses on environmental benefits (Dörry & Schulz, 2018). Environmental benefit emphasises assessing risk, meeting sustainability standards, and so on (Volz, 2018). As green financing covers a broader area, one of its core elements is green banking, which focuses on the environment-friendly investment and lending activities of the banking industry (Sarma & Roy, 2020).

Green Banking

Since global warming and recession hit the world, the call for reshaping banking operations to bring the best outcome for society has been in focus (Mullineux, 2014). In 2008, it was realised that green banking was one of the few concepts that fulfil the urge (Chen et al., 2018). Changing the banking strategy is not the only purpose of green banking; rather, it reshapes the ideology of this system (Ellahi et al., 2021). Developed countries like the USA, Australia, and the United Kingdom have become the pioneers in adopting such banking practices (Lalon, 2015; Ibe-Enwo et al., 2019). The idea of green banking is not limited to the boundary of an environment-friendly investment plan. It also accelerates in conducting banking activities, while protecting the environment, by reducing the carbon footprint (Lindenberg & Volz, 2016). One of the main priorities for investment plans under green banking is financing the research and innovation of green technologies (Kennan, 2014). Such banking policy is gaining popularity as entrepreneurs and customers are both becoming more concerned about protecting the environment. As a result, getting involved with a business that increases pollution is becoming a reputational risk for the banks (Sarma & Roy, 2020).

Green Banking around the Globe

Since the introduction of green banking practices, the world has witnessed significant development and concern towards enhancing and implementing this banking practice. Australia has declared an innovation fund under this banking practice to facilitate green innovation (Climate Works Foundation, 2018). Japan launched a green bond policy in 2017. India has introduced a 'green window' in the financial institutions, which is a ring-fenced fund for implementing and enhancing specialised green catalytic financing ideas (Climate Works Foundation, 2018). As a result, green banking research has become a fascinating field to explore since 2010. Various researchers have conducted the study by focusing on explicit dimensions. Kapoor, Jaitly and Gupta (2016) have elaborately presented the benefits and shortcomings of the green banking procedure in their publication. Some of the publications have tried to explore this banking concept from a different perspective, by analysing the relation between green banking performance and different stakeholders' contributions, such as customers, employees, and regulatory stakeholders (Alshebami, 2021; Nisha et al., 2020; Lee & Ball, 2003). Other studies tried to explore reporting and disclosure practices by focusing on externally developed voluntary initiatives and the influence of international presence on climate change disclosure (Halkos & Skouloudis, 2016). Furthermore, research has highlighted that in India, greenwashing is working as a building block towards the implementation of the green banking system (Sharma & Choubey, 2021).

Green Banking in Bangladesh

Since global warming and natural calamities have become common phenomena, the financial system is facing greater risk to maintain stability (Khairunnessa, Vazquez-Brust & Yakovleva, 2021). Nevertheless, research has highlighted the impact of banking activities on various environmental degradation and global warming, which has enhanced the necessity of having green banking (Bukhari et al., 2020). In 2011, like other developing countries, Bangladesh started focusing on developing environmental banking policies. Bangladesh Bank, the state bank of Bangladesh, introduced the three-phase green banking policy for the first time, which is a guideline for the other banks to demonstrate their dedication towards environmentally friendly banking practices (Bangladesh Bank, 2017). The purpose of these three phases is to provide a primary guideline; based on these, banks can develop their customised green banking policies. It also contains detailed instructions, with a time slot, to ensure proper enforcement of environmental protection concerns during banking activities (Nisha et al., 2020). The following is a summary of these three phases.

Phase 1 (Foundation Phase, deadline, 31 December 2011): During this introduction phase, it was expected that banks would concentrate on developing green banking policies

to demonstrate their obligation towards protecting the environment (Rahman & Barua, 2016). The banks needed to prepare a detailed environmental policy to ensure the availability of an elaborate illustration of strategies to cover nine major guidelines. It would primarily emphasise policy formulation and governance, incorporation of environmental risk, instigating in-house environmental management, and development of green finance (Hossain et al., 2016). Furthermore, it was instructed to introduce green marketing and to create a Climate Risk Fund (CRF). The purpose of enforcement to maintain CRF is to facilitate sustainability against climate change. At least 10% of the CSR budget needs to be set aside for CRF (Bangladesh Bank, 2019). This fund amount is dedicated to distributing, as a grant, to various environmental protection works, such as tree plantation, waste removal campaigns, and so on. Besides this, the policy also mentioned that for the implementation of online banking, and to facilitate the efficiency of digital banking, necessary training needs to be provided to the employees. A proper campaign to create awareness among customers for contributing towards protecting the environment needs to be designed. Lastly, all the actions need to be validated by making proper disclosures in the annual report (Julia et al., 2016).

Phase 2 (Intensification Phase, deadline 22 July 2012): During this phase, Bangladesh Bank requested all the financial institutions to prepare an outline for six policies, to participate in the environmental risk management movement. It stressed developing specific environmental policies for various sectors and building green branches as a part of the green strategic planning. Nevertheless, it also focused on the development of environmental risk management plans and guidelines, particularly dedicated for the bank, the enhancement of internal environment management, the introduction of accurate programmes for educating customers, and most importantly, maintaining the proper disclosure and reporting practices of green banking activities in the annual report (Masukujjaman & Akter, 2013; Julia et al., 2016).

Phase 3 (Diversification Phase, July 2012 onwards): In this last phase, it is expected that banks will focus more on detailed planning by considering the ecosystem as a whole. This phase encouraged the innovation of products for efficient green banking implementation and the development of a standardised environmental reporting format, which can be followed by all banks. Primarily, the deadline for this phase was decided as 31 December 2013, which has been extended until all the banks can introduce and establish an efficient system for environmental management (Rahman & Barua, 2016; Hossain et al., 2016).

Since 2011 researchers have been interested in exploring green banking performance in Bangladesh. Bangladesh Bank's guidelines have brought significant developments in the banking industry's environmental reporting and disclosure practices (Bose et al., 2018). Consequently, a satisfactory performance, in terms of environmental reporting, has been found in the listed banking companies (Masud et al., 2017), which has improved since 2011 (Hossain et al., 2016).

HYPOTHESIS DEVELOPMENT

The literature review has drawn a clear picture, that in developing countries green banking is an emerging topic, and the reporting practices for such issues have shown significant development in recent times. It has always been assumed that listed companies focus on the development of their environmental reporting practices, because they have a direct influence over their stakeholders' perceptions. Among the stakeholders, shareholders play a significant role; shareholders' trust and perception towards the institution influence their investment decision. Contributing to making the business strategy environmentally friendly or endowing others to preserve the environment while doing business facilitate the shareholders' positive perception towards the institution. Such action increases the corporate value, which results in enhancing the share price as well. In other words, it can be said that investing in green banking influences financial performance. So, the first hypothesis for this paper is:

H_1: There is a positive relationship between green banking investment and financial performance.

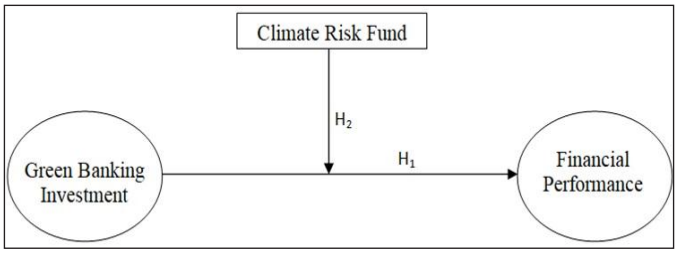

Fig. 1: The Proposed Research Structure

CSR activities enable a bank to participate in philanthropic causes. The purpose of such activities is to contribute towards achieving sustainability by performing social responsibilities (Brammer et al., 2007). CRF is part of the CSR budget, which requires proper representation in the annual report to highlight the firm's involvement in the climate change movement. By allocating funds for CRF, banks try to fulfil their social responsibility for reducing the

carbon footprint. It also reflects their enthusiasm towards a sustainable contribution to society, which facilitates the institutions' brand value. In other words, it can be said that CRF plays the role of a moderator in the relation between GBI and financial performance. So, the second hypothesis for this paper is:

H_2: Climate risk fund can positively moderate the relationship between green banking investment and financial performance.

Fig. 1 illustrates the conceptual framework and the proposed hypotheses for this research.

RESEARCH METHODOLOGY

Sample Selection

To conduct this analytical research, primarily all banks functioning in Bangladesh and listed under the Dhaka Stock Exchange could be considered as a viable sample. Currently, in Bangladesh, 59 scheduled, and five non-scheduled banks are performing (Bangladesh Bank, 2019). As this research aims to explore the contributions made only by local commercial banks, 33 private commercial banks have been shortlisted. Among this list, based on the performance and size of the bank, a further shortlist has been created. Banks that have more than 1,500 permanent employees and profit after tax of more than 1500 million BDT were the parameters used to measure the performance and size of the bank. Twenty-one banks have fulfiled both criteria, and among these banks, based on random sampling, ten banks have been chosen for this study.

Data Collection

This research is based on secondary data. The audited annual reports of the banks are the primary source of data collection for this study. Furthermore, Bangladesh Bank's sustainability report and green banking report published by banks have also been used to gather the necessary data.

Measurement

This research will adopt existing scales from different published research works. Based on the literature review, Table 1 has been developed, which has been used as the primary structure of measurement.

Table 1: Source of Measurement Instruments

Variable	Constructs	Source
To measure the financial performance	EPS	Judge and Douglas (1998) Cohen et al. (1995) Kaur and Kaur (2021)
To measure the CRF	The amount allocated to environmental issues (CRF) in the budget.	Kassinis and Vafeas (2006) Tietenberg (1990)
To measure GBI	Investment in green banking activities.	Bangladesh Bank (2019)

Control Variables

The control variable is an essential element that does not change during the testing, and its neutral behaviour enables one to test and understand the relationship between the dependent and independent variables (Hair et al., 1998). In this study, the control variables are bank size and category of banks, based on their focus on functions.

The purpose of choosing bank size as a control variable is the belief that larger institutions have better opportunities to allocate more resources to adopt new policies (Gupta & Govindarajan, 2000; Cohen & Levinthal, 1990). This control variable is measured by the total number of employees permanently employed in the banks. The second control variable is the banks' category based on their functional specialty. The bank's specialty has been measured using a dummy variable. Here, the variables' differentiate between conventional private commercial banks equals 1, and Islamic private commercial banks equals 2.

DATA ANALYSIS AND RESULTS

Table 2: Descriptive Statistics and Pearson's Correlation Matrix

	Mean	S.D.	GBI	CRF
GBI	16388413920	27925918749.37		
CRF	65265964.0	106318774.96	0.956**	
EPS	3.85	3.39	0.417	0.251

Notes: ** = Correlation is significant at the 0.01 level (two-tailed tests).

GBI = Green Banking Investment, CRF = Climate Risk Fund, EPS = Earnings Per Share.

Table 3: Descriptive Statistics

	GBI				CRF				EPS			
Banks	**Mean**	**S.D.**	**Max.**	**Min.**	**Mean**	**S.D.**	**Max.**	**Min.**	**Mean**	**S.D.**	**Max.**	**Min.**
Al-Arafah Bank	1476.76	716.24	2436.76	836.76	11.81	2.57	15.74	8.78	2.62	0.45	3.15	2.25
Bank Asia	46.01	46.65	128.86	18.21	11.67	0.75	12.70	10.91	2.01	0.54	2.92	1.57
BRAC Bank	8726.62	3246.54	12000.00	5000.00	85.34	52.62	164.30	31.60	4.22	0.65	4.86	3.19
DBBL	49493.66	8505.50	56747.00	35400.00	131.34	35.35	164.72	90.50	13.20	5.10	21.00	8.70
Eastern Bank	306.33	338.79	878.00	80.00	10.77	4.12	15.12	5.25	3.96	0.64	4.94	3.26
IBBL	83184.95	11216.04	97476.00	70044.90	344.15	200.44	671.72	180.49	2.93	0.70	3.77	1.88
National Bank	3685.70	4037.49	9329.00	337.06	23.18	15.85	44.32	7.85	1.66	0.28	1.98	1.40
Pubali Bank	342.22	301.20	789.60	98.00	9.44	3.39	14.09	6.50	2.10	1.32	3.43	0.28
Southeast Bank	15552.49	1907.40	17532.00	13407.00	16.14	6.04	24.18	10.50	2.32	0.89	3.55	1.11
The City Bank	1069.40	711.98	2152.00	306.00	8.82	5.42	14.61	3.25	3.44	1.10	4.50	2.10

Notes: All the numbers expressed in million.

To investigate the hypothesised causal relationship among GBI, EPS, and CRF, the Statistical Package for Social Sciences (SPSS) version 26 has been used to run regression analysis. Table 2 and Table 3 have presented pictures of the descriptive statistics and correlations of all critical variables of this study. Fig. 2 has presented the average z score of all variables in the scattered diagram. Table 4 reports the estimation results of the regression models. Model 1 only includes the control variables, such as banks' size and bank's functional specialty; all the control variables are insignificant. Next, model 2 represents the independent variable (GBI) and the moderator (CRF). As expected, the coefficient of GBI and EPS in model 2 is significantly positive (Model 2: $\beta = 1.94$, $p < 0.001$), which proves the first hypothesis that there is a positive relation between GBI and EPS.

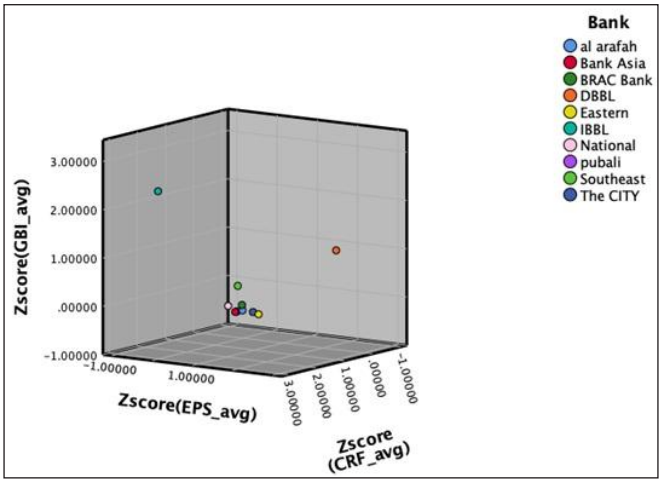

Fig. 2: Three Variables' Scatter Plot

In model 3, the interaction term of GBI × CRF has been presented. According to Baron and Kenny (1986), if the coefficient for the interaction term is significant, the moderator hypothesis will be accepted. In this research, the coefficients of the interaction effects of GBI and CRF are positive and significant (Model 3: $\beta = 1.65$, $p < 0.01$), which proves the second hypothesis. The strength of association between the independent variable (GBI) and the dependent variable (EPS) can be explained by the value of R^2 (Hössjer, 2008). A higher value indicates that a significant portion of the dependent variable's data can be explained by the independent variable. Here, the result can be interpreted as 35% of the variation in EPS can be explained by GBI with the presence of CRF.

Table 4: Results of Regression Analysis

Variables	Model 1	Model 2	Model 3
	S. β	S. β	S. β
Controls			
Firm Size	0.37	0.37	0.37
Bank's Functional Specialty	−0.30	−0.31	−0.31
Main Effects			
GBI		1.94***	1.94***
CRF		1.58*	1.58*
Moderating Effects			
H_2: GBI × CRF			1.65**
F Value	0.58***	1.301***	1.95**
R^2	0.11	0.30	0.35

***$p < 0.001$
**$p < 0.01$
*$p < 0.05$

DISCUSSION

The result indicates that the relation between GBI and EPS becomes positively more assertive in the presence of CRF. This result can explain the bigger picture of the current banking industry. Over the period, the financial market

has changed. As a result, the trend of the economy has also shifted. Citizens are becoming more concerned about environmental protection, which motivates banks towards doing environment-friendly business. This growing demand for green business has been reflected in the outcome of this research, primarily. Different industries are becoming concerned enough to invest in making their business environment friendly, such as the RMG sector in Bangladesh, which has invested the highest amount for protecting nature (Sarkar et al., 2020). The bank mainly distributes the GBI budget for conducting green business or for upgrading existing business strategies to reduce carbon footprint. Over time, all the banks have increased this fund because the demand in this field is developing (Bangladesh Bank, 2019).

Furthermore, the first hypothesis indicates that GBI has a positive impact on financial performance, which can be interpreted as the green business investment being financially profitable for the banking industry. The positive relation on EPS indicates that the shareholders can enjoy this outcome. EPS not only indicates the current earnings of the shareholders, it also indicates the estimated corporate value of the shares, which is influenced by the market's perception of the institution. All these clearly indicate that stakeholders prioritise the firm's devoted involvement in the protection of its surrounding environment, which brings a positive reflection on the financial performance of the firm.

Besides, this study gives an idea about the other side of the picture. GBI reflects the bank's investment towards green business, but CRF gives the picture of the institution's social standing on the environmental issue. Investment in green business is profitable for the bank, but this relation can be enhanced with the presence of CRF. As CRF is a proportion of CSR funds, the variable's moderating effect indicates that the institution's social contribution to reducing the carbon footprint presents a motivating and trustworthy picture of the firm (Bangladesh Bank, 2017). Shareholders are able to get a clear picture of the institution's perception and business policies towards environmental safeguards. Such disclosure also contributes to the enhancement of the brand value, as the other stakeholders (such as customers and creditors) are also able to understand the firm's contribution towards fulfiling not only its social responsibility, but its corporate environmental responsibility as well. This cheerful branding influences customers to believe in the organisation and their vision for doing business without harming the environment, which reflects on the financial performance.

CONCLUSION AND FUTURE SCOPE

This research has explored the relationship between GBI and the financial performance of the banking industry in Bangladesh. From the study, it can be concluded that with the existence of a reasonable amount of CRF, GBI can improve the financial performance of an institution. This may imply several possibilities, such as distributing CSR funds more wisely, introducing further policies for green banking implementation in Bangladesh, and so on.

Currently, the banking industry is spending a tremendous amount of money on CSR activities. According to Alo (2020), in 2019, Bangladesh Bank published data that indicates that all the banks operating in Bangladesh have spent a total amount of 9,040 million BDT for different types of social development activities. With a more in-depth look at this amount it is found that a significant portion of it is invested in the PM relief fund, which enables an institution to build a positive liaison with a political party, thus getting a key for a tax rebate. Furthermore, it has highlighted the fact that 50% of the total CSR fund has been used in the health and education sector, of which a large portion has been used for arranging various public awareness programmes (Hasan, 2020). Instead of wasting CSR funds for fulfiling such social responsibilities, which are taken care of by the government and NGOs, banks should consider increasing the allocation for CRF. Such an action can benefit all the stakeholders and can contribute towards sustainable development.

The three-phased green banking policy developed by Bangladesh Bank has been highly appreciated over time. Moreover, every year, Bangladesh Bank publishes an environmental performance report to evaluate the green banking performance of all financial institutions. Such an evaluation, and the green banking policy, both indicate Bangladesh Bank's dedication and enthusiasm towards implementing environmental banking. However, it is high time since the 2012 amendment for changing the ratio for CRF funds has been introduced. In the current platform, there is a strong need for further guidelines to drive financial institutions into keeping CRF allocation at more than 10% of the CSR fund. Increasing CRF funds will not only accelerate GBI's impact on the financial performance, it may also define the fact that the current crowd is educated enough to appreciate such sustainable issues while using banking facilities.

The study may have two limitations, which allows for further exploration in this field. First, this study may have a methodological limitation as the data represents different banks' five years' picture. As green banking practices and reporting in Bangladesh are relatively new, a massive data pool has not been developed yet. Future studies should consider more banks; and longitudinal data can be used to explore the hypothesis. Such data can give new insights into this causal relationship, because alternative methods and alternative regression techniques can overcome each other's limitations (Edwards & Parry, 1993; Klein et al., 2009; Zaman et al., 2021).

The second limitation is that while analysing the hypothesis, only Bangladesh's perspective has been considered, which represents the developing South Asian country's economy. Future studies may consider testing this relation in different social, cultural, and economic regions, to explore the outcome. For instance, such a causal relationship can be evaluated for the Middle East, where dependency over the banking system is high and 90% of the financial system is focused on the banking industry (Kasturi, 2018). Furthermore, this type of consequential relationship can be explored in the Islamic banking industry, where the protecting environment is one of the core values of the business (Julia et al., 2016).

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