

Sustainable Banking Practices and Their Development: A Study on Banks Operating in Bangladesh

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ABSTRACT

Sustainable Banking Practices (SBP) are the ways to promote environmentally friendly practices leading to profitability. The present study aims to examine the current situation of SBPs in a range of banking institutions in Bangladesh and their level of development following the financial rules and regulations. This study draws on the annual and quarterly reports of Bangladesh Bank (BB) during the period between 2016 and 2021 fiscal years. In order to collect the secondary data, the authors have applied the internet and commercial banks' websites, BB websites, etc. The analysis and interpretations have been made in the light of practice and progress of sustainable banking activities in Bangladesh. The study reveals that BB has taken praiseworthy initiatives to ensure a sustainable banking environment through a range of their banking activities. It also shows that green banking, corporate social responsibility, and financial inclusion practices by the banking sector are not in the benchmark as directed by the BB. The study recommends that effective steps are needed from BB, the government, and other stakeholders to solve the existing problems of executing sustainable practices in the banking sector.

KEY WORDS

Sustainable Banking, Green Financing, Corporate Social Responsibilities, Financial Inclusion, Banking Companies.

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1. Introduction

Sustainable Banking has emerged as a prominent concept in the realm of sustainable finance, with the aim of fostering a sustainable global economy. This economy relies significantly on the financial industry, particularly the banking sector, as it plays a pivotal intermediary role in channelling financial resources towards sustainable objectives

(Alexander, 2014; Beck et al., 2010; Yip & Bocken, 2018). Research by Yip & Bocken (2018) highlights that sustainable banking encompasses the provision of financial products and services that not only generate profit but also address societal needs while ensuring environmental protection. In this context, green banking is regarded as a subset of sustainable banking, carrying a crucial

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responsibility in safeguarding the planet from environmental degradation and contributing to economic growth through sustainability-driven practices (Islam et al., 2020).

According to the Sustainable Finance Unit of the Bangladesh Bank, sustainable banking is an integral component of sustainable finance, comprising key elements such as green banking, corporate social responsibility, and financial inclusion activities. These components collectively contribute to the pursuit of sustainable development goals while aligning the banking sector with broader environmental and social objectives.

Green finance encompasses the value of the green credit amount and entails a range of managerial actions that compel commercial banks and other financial institutions to engage in research and development initiatives focused on establishing a sustainable banking system while upholding unwavering commitments to environmental protection and reform. The growth of green finance is instrumental in driving advancements and facilitating the transition towards a green economy, wherein financial decisions are aligned with environmental commitments to yield optimal outcomes (Wang & Zhi, 2016). In line with the principle of sustainable

development, enlightened self-interest is emphasized, often encompassing the triple bottom line of economic, social, and environmental performance (Rahman & Rahman, 2020). This underscores the significance of integrating economic prosperity, social well-being, and environmental sustainability as interdependent aspects in the pursuit of sustainable development goals.

As the most climate change-affected country in the world, Bangladesh faces a variety of environmental challenges including water pollution, air pollution and scarcity, deforestation, increasing disaster risk, and biodiversity loss. (Akter et al. 2018). Therefore, Bangladesh needs proper revision and utilization of green banking for its sustainable development (Saha et al. 2020). Bangladesh started its practice of green banking in recent years and Bangladesh Bank (BB) is striving to do its level best in this concern. To put green banking into practice, BB developed the green banking rules in 2011, becoming the first central bank in the world to have a profound and obvious awareness of green banking. All regular banks, such as private, public, and foreign banks, are thoroughly working with sustainable banking, especially green banking initiated by BB. As per BB's data, all planned banks have developed their

own green banking policy and green banking units. Besides, it has also created a friendly atmosphere for the banking sector to ensure the profound impact of green banking on the socio-economic landscape of Bangladesh. Sustainable banking (Jeucken, 2010) and associated terms such as banks' Corporate Social Responsibility (CSR), Ethical-banking (Birindelli et al. 2015) Eco-banking, and Green-banking (Bahl, 2012; Bouma et al. 2017) have been analysed extensively since they play decisive roles in sustainable development. Similarly, Fabregat-Aibar et al. (2019) analyses socially responsible funds, and Zhang et al. (2022) and Sarma & Roy (2021) study green banking. Ahmad et al. (2013) conclude that ensuring sustainability which is imposed by Bangladesh Bank is one of the major factors in practising green banking in Bangladesh.

However, sustainable banking practices and their development among financial institutions have been ignored in Bangladesh. Therefore, the main objective of the study is to examine the overall sustainable practices in a range of financial institutions operating in Bangladesh. In order to accomplish the major objective, this study aimed to explore the following specific objectives: (i) to analyse the sustainable banking policies which are

provided by Bangladesh Bank, (ii) to identify the level of sustainable banking practices in terms of green finance, corporate social responsibility, and financial inclusion of banks in Bangladesh, (iii) to identify the problems associated with these practices, and (iv) to provide some evidence-based recommendations to be effective for the concerned stakeholders.

2. Methodology of the Study

2.1 Population and Sample Size,

Sources of Data and Techniques: The population of this study comprises all the scheduled banks operating in Bangladesh. The sample size is 30 scheduled banks which have been selected to measure the nature and trend of sustainable banking practices in terms of green banking, corporate social responsibility practices, and financial inclusion activities. Data for the last six years (2016-2021) from the selected banks were used for the analysis. The study has considered only the secondary data. Data regarding sustainable banking, green banking policies, and guidelines have been collected from published annual reports of the Sustainable Finance Department of BB as well as the annual reports of scheduled banks.

2.2 Data Analysis Techniques: We have used a mix of quantitative and qualitative approaches. A qualitative analysis has been conducted of the

green financing policies and guidelines given by BB. To determine the growth level of sustainable banking practices, which is a quantitative approach, we used a spreadsheet and MS Excel to collect the necessary data to calculate the growth rates. Then, the analyses and interpretations were done by comparing with the data of the practices of the previous year.

3. Analysis and Findings

3.1 Analysis of Sustainable Development Policy Initiatives by Bangladesh Bank: Bangladesh Bank (BB) has integrated sustainability terms into core banking practices through green banking, corporate social responsibility, and financial inclusion. The BB has been extending the sustainable banking policy and instructions for banks and non-bank financial institutions (NBFIs) so that they can ensure the practices of sustainable banking. The BB has achieved recognition for being a beginner in this field by forming policies and facilitating pioneering schemes to endorse green finance. Since 2011, the BB has established several policies to endorse sustainable finance. The BB issued the guidelines in the year 2011 for Banks and Financial Institutions (FIs) to assess the environmental risk in their approved credit. In another circular issued the same year, the Bank

released the Green Banking Policy Guidelines, which require banks to conduct an initial assessment of due diligence checklists and a detailed environmental review before making investment decisions in proposed plans and projects. (BB's Annual Report 2019-2020 & Business Standard 2020). The guidelines were instructed in three phases- "Phase (i)- the policy formulation and governance, Phase (ii)- green strategic planning and specific environmental policies, and Phase (iii)- conforming the designing and introducing innovative projects" (Bose et al. 2021) to confirm the capability and competence of the commercial banks in order to rightly quantify the risk and finance in the environmentally sensitive projects (Dikau & Collins 2017; Business Standard 2020; Ullah 2013).

In the year 2013, the implementation experience of ESRM Guidelines was assessed jointly by the Bangladesh Bank and IFC in the country, and as per the findings in February 2017, the up-to-date version of the guidelines was published as the term Environmental and Social Risk Management (ESRM) Guidelines. The suggested new guidelines of ESRM highlight the risk justification measures, integrated environment, and social risks for all credit management in a comprehensive way and provide user-friendly reporting

structures for all banks and financial institutions. The central bank sets 5% of the minimum annual target of direct green finance of the total loan disbursement by the banks and NBFIs since February 2016. It was also directed to the Banks and FIs to form a Sustainable Finance Unit as well as a Sustainable Finance Committee instead of Green Banking and CSR units. They are neatly instructed to form a Climate Risk Fund where at least 10% fund would be allocated to their CSR budget as well as to set up Solid Waste Management System, Rainwater Harvesting, and Solar Power Panels in their newly constructed or arranged building infrastructure (Hoque et al. 2019; BB's Quarterly Review Report 2020; Business Standard 2020).

For the banks and FIs in Bangladesh, ESRM guidelines were circulated along with an Excel-based Rating Model to estimate the Environmental and Social Risks in the process of Credit Risk Management and also a detailed list of products or initiatives of Green Finance in the year 2017. Later on, a new uniform reporting format of Quarterly Review Reports on Green Banking activities had been circulated for Banks and FIs to monitor green banking policy and other regulations and to ensure the quality and uniformity of data provided by Banks and FIs. In the year 2019 one circular by BB, made it clear

that any investment by the scheduled banks and FIs in the impact fund which is listed under the BSEC (Alternative Investment) Rules, 2015 and designed for environment-friendly fields having the scopes of resource and energy efficiency, renewable energy, waste management and treatment, climate-friendly transportation, women and child right protection, etc. will be considered as green finance (Appendix)

3.2 Refinance Scheme for Environment-Friendly Products or Initiatives:

Bangladesh Bank has established a revolving refinance scheme to respond to the broad financing avenue for green products like solar energy, effluent treatment plant, and biogas plant, etc. amounting to BDT 200 crore from its own fund for solar energy, biogas, and effluent treatment plant in 2009 but the fund size has been increased from BDT 200 crore to BDT 400 crore in view of the growing demand for the financing of environment-friendly products or initiatives. BB has enhanced the product line to 55 under 09 categories (BB's quarterly report April-June 2021). Till June 2021, the total amount of Tk. 5,912.69 million had been disbursed for refinancing purposes from the fund. The disbursement scenario of this scheme from the year 2016 to 2021 and product-wise disbursement

amount are shown in the Annex Table. BB is trying its level best to lift up the whole scenario by designing appropriate policy initiatives. Refinance support from BB is one of the important role-playing schemes playing to carry motivation for green banking activities. Generally, as the outcome of these initiatives taken by BB, positive effects and impacts are expected in the field of sustainable finance by banks in a gradual manner. During the last few years, the total disbursement trend has been highly positive except in the years 2017 and 2019. Especially from the year 2020, there has been an eye-catching positive trend in this field although it had to cover the negative trend of the previous year. However, without exception, the study claims that a great attempt was taken in the related years. Thus, the Sustainable Finance Department of BB is expecting robust, effective, and coherent efforts and hard work from banks and FIs in this field.

3.3 Green Transformation Fund (GTF): The Green Transformation Fund (GTF) was introduced in January 2016 with an initial capital of 2 crore USD to promote sustainable growth in the export-oriented textile and leather sectors, thereby fostering the development of a green economy in Bangladesh. To facilitate broader participation and extend the fund's reach, the Bangladesh Bank (BB)

established a provision for a Participation Agreement to be signed between BB and the intended banks. This agreement allowed all manufacturers and exporters, regardless of their sectors, to access the fund for importing capital machinery and accessories for the implementation of specified sustainable and environment-friendly initiatives. These initiatives encompassed various areas such as water use efficiency in wet processing, water conservation and management, waste management, resource efficiency and recycling, renewable energy, energy efficiency, heat and temperature management, air ventilation and circulation efficiency, and work environment improvement.

In September 2019, the scope of the GTF was expanded to accommodate green machinery and industrial raw materials for all manufacturing enterprises, including both export-oriented and domestic-oriented businesses. Subsequently, the fund was augmented with an additional 2 crore Euros, thereby enhancing its capacity to support sustainable projects. To date, 27 banks have signed the participation agreement with BB under the USD component of the GTF, while 21 banks have done so under the Euro component. The disbursements from the GTF amounted to 118.59 million USD

across 23 projects and 8.41 million Euro across 6 projects as of June 30, 2021. During the quarter of April-June 2021, the fund facilitated disbursements of 12.99 million USD and 1.17 million Euro, as per the BB's quarterly report for that period.

3.4 Refinance Scheme for Islamic Banks for Investment in Green Finance:

In 2014, the refinance scheme by Bangladesh Bank had been introduced to bring benefits to the Shariah-based banks and FIs (GBCSRD circular no.06/2014). Another integrated and comprehensive circular was issued by BB in 2018 titled "Master Circular" (SFD circular no. 02/2018) by revising and combining all the previous circulars and circular letters associated with this refinance scheme. BB took the initiative and the product range has been enhanced under this scheme from 50 to 51 and set apart these products into 08 categories. The cumulative amount of refinancing under the scheme up to June 2021 stood at BDT 476.73 million. Total disbursement under this scheme during FY21 was BDT 37.91 million (BB's annual report 2020-2021). During the April-June 2021 quarter, Bangladesh Bank disbursed BDT 4.59 million for "Working Environment and Fire Safety of Factory" and collected BDT 1.27 million profit against this product.

3.5 Environmental Management activities (in-house) Taken by BB:

Bangladesh Bank had already taken a huge number of actions to ensure its in-house operational progress activities. These functions are the highest level of environment-friendly, technologically advanced, and energy-efficient ones. BB takes the following noteworthy steps towards in-house green practices: (SDF, BB, 2019-2020)

- Bangladesh Automated Cheque Processing System (BACPS)
- Bangladesh Electronic Fund Transfer Network (BEFTN)
- Carbon Footprint Measurement & E-recruitment
- Credit Information Bureau (CIB)
- Enterprise Data Warehouse (EDW) System
- Enterprise Resource Planning (ERP) & Online Account Statement
- LAN/WAN Computer Network among all BB offices
- Online Documentation & Leave Management System
- Online Office Order & Electronic Pass for Visitors
- Rooftop Solar Power System & Chiller Based Air Conditioning

4. Sustainable Development Initiatives by Banks and Financial Institutions

4.1 Policy Formulation and Governance: BB introduced the Sustainable Finance Policy in

December 2020 and also defined sustainable finance for banks and FIs. With the exception of Bengal Commercial Bank Limited, all scheduled banks, and FIs have already established their own sustainable finance department; however, they need to develop their own sustainable finance policies this year.

4.2 Green Finance: This section outlines the green finance trends of banks in Bangladesh in recent years. It exhibits green financing activities of banks and NBFIs accumulated from the annual reports of 2016 to 2021. Annex Table- 01 shows the year-on-year disbursement of green finance whereas Annex Table- 02 represents category-wise direct green finance from the year 2016 to 2021. The total amount of green financing directly disbursed by Bangladeshi banks in the fiscal year 2021 was 97,637.73 million Bangladeshi Taka (BDT) representing a negative growth of 7.82% over the previous year. The data from these tables indicate that except for the unexpected decline in the year 2021, there has been a consistent and appreciable increase in disbursements aimed at promoting the sustainability of our economy throughout the specified period. Regarding the involvement of banks, in 2017, the Bangladesh Bank (BB) issued a circular introducing the 'Environmental and Social Risks Management (ESRM)' guidelines

along with a Risk Rating Model based on Excel that was provided to banks and financial institutions in Bangladesh to evaluate Environmental and Social Risks to proceed the Credit Risk Management. The results of regulations and reporting requirements by Bangladesh Bank are the implications as green performances seen in 2018, the investment increased by 99.68% from the previous year. In addition, relatively slow growth can be observed in 2019 and 2020 and the cause could be the COVID-19 situation which affected investment prospects across the country. It is noticed that private commercial banks have contributed near about 74.33% of the total green finance and they are playing a vibrant role to make sure the green economy of the country as per the annual report of BB 2020- 2021.

Annex Table 02 shows the percentage of green funding by category for fiscal years 2016 through 2021, which demonstrates that the greenest funding was mobilised in green establishments. This table shows that in 2021 there was a negative trend, while in previous years there were only positive trends, which changed particularly in 2018. However, Green Finance is 2.38 % of total term loan disbursement (BB's quarterly review report April-June 2021), which is still less than the target of 5% set by BB.

4.3 Environmental and Social Risk Management:

As per the directed framework given by BB, nearly all banks have established their environmental risk management guidelines. It is also noted that they have more or less tried to consider both investment risk management and environmental risk management at the time of financing the project. Sometimes environmental risk has been integrated into the banks' credit appraisal process. 42 banks out of 61 have conducted environmental risk ratings where Tk 662,870.66 million has been disbursed against 17,606 rated projects (April-June, 2021 quarter). However, the Environmental and Social Risk Rating (ESRR) has emerged as a compulsory requirement for both banks and Non-Bank Financial Institutions (NBFIs), as stipulated in the guidelines on Environmental and Social Risk Management (ESRM). These regulations play a pivotal role in ensuring that financial entities incorporate comprehensive assessments of environmental and social risks into their operations.

4.4 Online Banking and Energy

Efficiency: Sustainable banking practices have gained prominence as an avenue for promoting environmental responsibility within the financial sector. Among such initiatives, the establishment of online branches and the adoption of

solar energy to power physical branches stand out as notable approaches. In our country, the central regulatory authority, Bangladesh Bank, has been actively encouraging banks to embrace green banking policies, which encompass the implementation of online branches and the integration of solar-powered facilities in their branch network. The policy results got 714 branches that were powered by solar energy at the end of the financial year 2021 which was 17.63% more than that of the previous year. As a matter of fact, there is a positive trend in stores powered by solar energy (Annex Table 03). 714 branches of banks were solar-powered, and 9 branches developed solid waste management systems. Solar-powered ATM booths were established in 22 branches and a rainwater harvesting system was also created in 5 branches of the banks in the April-June, 2021 quarter. In this period 95.48% of branches of all banks were also brought under online banking. The percentage of online branches established by banks is clearly a positive trend (see Annex Table 03).

4.5 Corporate Social Responsibility:

In both June 2008 and December 2014, the Bangladesh Bank (BB) issued a set of comprehensive Corporate Social Responsibility (CSR) policies and guidelines, specifically targeted at banks and Non-Bank

Financial Institutions (NBFIs) operating within the country. The primary objective of these policies and guidelines was to monitor and oversee CSR initiatives in the financial sector, outlining the administrative structure, CSR activities, budget allocation, and monitoring processes. This framework provided a clear delineation of the administrative structure, defined the scope of expected CSR activities, outlined the allocation of budgetary resources, and established a robust monitoring process for tracking CSR expenditures and activities. Subsequently, in June 2015, the BB introduced a standardized reporting format specifically tailored for monitoring the CSR activities of banks and financial institutions. The implementation of this monitoring mechanism aimed to enhance the overall efficiency and effectiveness of CSR initiatives within the sector. Consequently, there was a notable upsurge in the total Corporate Social Responsibility (CSR) spending by banks in both 2020 (amounting to BDT 6058.2 million) and 2021 (amounting to BDT 9,120 million), exhibiting growth rates of 31.52% and 50.54% respectively. The analysis reveals a consistent positive trend in CSR disbursements, except for 2019 (See Annex Table 04).

4.6 Financial Inclusion in Bangladesh:

In the pursuit of sustainable banking

practices in Bangladesh, the Bangladesh Bank (BB) places a vital requirement on banks to actively participate in Financial Inclusion Activities. This strategic approach is recognized as an effective means to attain inclusive and sustainable economic development. The implemented policies are geared towards promoting and ensuring the availability of multifaceted and equitable alternative distribution channels, particularly leveraging digital services, to extend formal financial services directly to individuals at their doorstep, catering to their preferences and needs.

The commitment to financial inclusion is deeply ingrained in the foundational legislation of "The Bangladesh Bank Order, 1972," guiding BB's operations. In alignment with this legal framework, BB diligently fosters financial inclusion initiatives, striving to optimize economic resource utilization for equitable economic growth in the banking sector. To meet its objectives, BB introduced its Strategic Plan in 2010, ensuring timely accomplishment of commitments and self-monitoring of progress. The subsequent Strategic Plan (2020-2024) encompasses various action plans aligned with specific indicators to gauge effectiveness. Notably, BB's initiative to license Primary Credit Banks (PCBs) in 1982 significantly

expanded the financial system, facilitating the growth of innovative services like Digital Financial Services (DFS) and Mobile Banking. Mobile banking services have gained remarkable popularity, successfully providing essential financial services to previously unbanked individuals, promoting financial inclusion, and addressing the needs of underserved populations. The adoption of mobile banking has become a powerful tool for achieving financial inclusion goals.

5. Trend and Development of Financial Inclusion Activities of Banks in our Country

5.1 Branch Network: Prior to 2011, the establishment of new branches in urban and rural areas was guided by a 4:1 ratio. However, in 2011, the Bangladesh Bank (BB) issued a new circular on the banks' expansion policy, revising the ratio to 1:1 for both rural and urban areas. Subsequently, in FY21, a total of 205 new bank branches were opened, bringing the total number of bank branches to 10,793 as of June 30, 2021.

5.2 Agent Banking: As of June 2021, BB's annual report revealed that 28 banks, representing a majority of the banking institutions, were engaged in Agent Banking. In FY21, a total of 12,912 agents were deployed, operating 17,145 outlets, which marked a significant increase of 47.33

percent and 37.72 percent, respectively, compared to the figures of 8,764 agents and 12,449 outlets in FY20. The total number of accounts as of June 2021 reached to 12,205,358, holding a total balance of BDT 203.79 billion. Furthermore, the foreign remittance distribution through agent banking in FY21 amounted to BDT 679.54 billion, representing a notable surge of 154.98 percent compared to BDT 266.51 billion in FY20.

5.3 ATM Services: ATM services have gained worldwide popularity due to their substantial contribution to the branchless banking system. Recognizing the customer-friendly nature of ATMs, BB encourages banks in Bangladesh to introduce and ensure the availability of ATMs to cater to the needs of their existing and potential customers. The country witnessed the introduction of its first ATM in 1993, and the number of ATMs in Bangladesh reached to 12,337 as of June 30, 2021, indicating the banking sector's efforts towards promoting financial inclusion.

5.4 NFAs Accounts: Financial inclusion in Bangladesh primarily focuses on low-income groups, and in this regard, the BB has issued directives to commercial and specialized banks to extend their services to cover the poor, deprived, and marginalized populations through No-Frill Accounts (NFA) with minimal or no charges. The NFAs are

designed to exclude unnecessary fees and frills. Various segments of the population, such as cleaning workers, dwellers of former enclaves, farmers, flood-affected marginal people, footwear and leather goods makers, freedom fighters, garment workers, physically-challenged persons, recipients of social security programs, small businessmen, small life insurance policyholders, small-scale factory workers, and street urchins, have been targeted by Bangladesh Bank to be included in the formal banking system through NFAs. Over the years, NFAs have played a significant role in advancing the country's financial inclusion objectives. By June 2020 and June 2021, banks operating under the financial inclusion program had opened a total of 220,706,630 and 24,233,665 NFAs, respectively, indicating a noteworthy annual growth rate of 11.7% in 2021 compared to the previous year.

5.5 School Banking Activities: The School Banking program represents a pivotal initiative in Bangladesh Bank's financial inclusion program. In November 2020, BB issued initial directions for introducing and implementing school banking accounts for students below 18 years of age. Subsequently, in October 2013, detailed policies were framed to govern this initiative. These policies stipulate that school banking

accounts can be opened by students with a minimum deposit of BDT 100 and without any service charges. However, it is noteworthy that out of 60 banks, only 55 currently offer the school banking program. As of June 2021, the total number of student accounts under the school banking initiative reached to 2,976,643, reflecting a 22.41% increase of 545,041 accounts compared to that of June 2020.

5.6 Banking for Working Children: In Bangladesh, street urchins, and working children have often been overlooked in financial services. In recognition of their vulnerable situation, the BB has directed banks to provide financial services to these children, ensuring the security of their hard-earned money and encouraging a savings culture. Children without parents can open accounts in banks operating in Bangladesh with the assistance of registered Non-Governmental Organizations (NGOs), and these accounts are exempt from fees. The participating NGOs bear full responsibility for managing the accounts and ensuring the welfare of the account holders. As of June 2020, 23 NGOs facilitated the opening of 10,029 accounts for street urchins and working children in 19 banks, reflecting a substantial increase of 4,882 accounts or 94.85% over the previous year.

In January 2020, the Bangladesh Financial Intelligence Unit (BFIU) introduced e-KYC (electronic Know Your Customer) guidelines, eliminating the need for paper-based documents for opening accounts in the financial sector.

5.7 Commercial Banks' In-House Green Practices: After analysing various commercial banks' websites, it was observed that several in-house green banking practices were being implemented as part of sustainable banking initiatives. These practices include converting the bank's vehicles to Compressed Natural Gas (CNG), using energy-efficient electronic equipment such as printer cartridges and photocopy toners, promoting shared table stationery instead of individual ones, embracing online communication whenever feasible, encouraging e-statements and e-applications to reduce paper usage, incorporating natural energy sources like water, wind, trees, and solar energy through green building architecture and interior design, and developing a Green Office Guide to ensure sustainable finance. Additionally, banks have adopted eco-friendly practices in email correspondence, file sharing, and lighting usage. Video and audio conferences are preferred over physical travel to save energy and reduce environmental impact. Banks have also improved their green

activities in accordance with their Green Office Guide, offered employee training, enhanced consumer awareness, and reported green banking activities to the Bangladesh Bank. They also motivate employees, customers, and the public through green banking slogans to promote environmental consciousness.

6. Discussion

The study reveals that with the exception of Bengal Commercial Bank Ltd, all scheduled banks have established their own Sustainable Finance Unit and Green Banking Policy. This observation is consistent with the implementation of the Sustainable Finance Policy introduced by Bangladesh Bank in December 2020. Out of the total 61 banks, approximately 51 banks had exposure to sustainable finance during the reporting quarter of April to June 2021, while 39 banks were exposed to green finance. Besides, it is worth noting that state-owned commercial and specialized development banks displayed relatively lower enthusiasm for adopting sustainable banking practices, as indicated in this study. Environmental risk ratings were conducted by 42 out of the 61 banks, with a total disbursement of Tk 662,870.66 million directed towards 17,606 rated projects during the reporting period of April-June 2021. Despite the promotion of sustainable

financing initiatives, the study finds that investments in Green Bonds, Green Sukuk, and Impact Funds by banks were absent. However, a considerable effort was made by 25 banks, conducting 79 training programs, benefiting 3,047 employees and customers, to enhance awareness and knowledge about Sustainable Financing.

Another study conducted by Akhter et al. in 2020 suggested that the current level of green banking practices, including standard formats and external verification, client education programs, and the establishment of climate risk funds, did not meet the desired standards. The study acknowledges that Bangladesh Bank has made progress in increasing the number of eligible green products/initiatives under the refinancing scheme, from 6 to 55 in FY21, across 09 categories. Besides, the percentage of online banking branches is 95.48%. On a positive note, the number of branches powered by solar energy reached to 714. The study further highlights that green finance constitutes 2.38% of the total term loan disbursement, below the 5% target stipulated by Bangladesh Bank. Despite this shortfall, the progress made by banks in green finance is considered positive, although there remained room for improvement in the year 2021. Regarding corporate social

responsibilities (CSR) by banks, the study identifies a notable growth of 50.54% in the year 2021.

In terms of overall banking expansion, the study reports that in 2021, 205 new bank branches were opened, and 28 banks were operating agent banking. Additionally, under the financial inclusion program, banks successfully opened a total of 24,233,665 No-Frill Accounts (NFAs). As of June 30, 2021, the number of ATMs in Bangladesh stood at 12,337. Furthermore, the school banking initiatives contributed to a significant increase in the total number of student accounts, reaching to 2,976,643 in June 2021, which represents a growth of 545,041 accounts or 22.41% compared to that of June 2020.

7. Conclusion

Bangladesh, being one of the countries heavily impacted by global environmental pollution, recognizes the crucial role of sustainable banking in response to global warming and overall development. Both the government and individual banks must take effective initiatives to promote sustainable banking practices, which are vital for environmental protection. The Bangladesh Bank (BB) emphasizes the importance of sustainable banking practices when granting permission for opening new bank branches and

approving new banks. The government should also encourage the general public to adopt sustainable banking practices. BB plays a crucial role in monitoring banks' adherence to green banking guidelines, fostering coordination among relevant authorities, efficiently implementing green banking and environmental risk management (ERM) guidelines, and fostering an organizational culture based on environmental governance. The commercial banks' compliance with green banking practices should be closely monitored. In today's intense national and global banking competition, each bank must actively participate and contribute to sustainable banking, especially green banking practices. According to the BB's quarterly report for April-June 2021, only seven out of the total banks achieved the target of green finance compared to their total term loan disbursement.

Organizations need to ensure that eco-friendly products are adopted to gain sustainable competitive advantages. Banks can align themselves as socially and ethically responsible entities by lending to organizations that prioritize environmental concerns. Moreover, it is essential for the government to enforce existing environmental regulations and establish appropriate rules to implement the "Polluter-Pays

Principle" (the requirement that the costs of pollution should be borne by those responsible for causing the pollution) in the country. BB can play a proactive role in formulating a national-level "Green Credit Policy" and creating a comprehensive incentive framework to encourage environmental risk practices by banks. Establishing a discount window can further motivate banks to engage in sustainable banking practices.

This study highlights that banks in Bangladesh are beginning to recognize the significance of integrating sustainable banking into their mainstream operations. However, challenges exist, particularly given the limited market institutions. Enhanced cooperation among all stakeholders and the implementation of comprehensive action plans can bolster Bangladesh's ability to combat environmental change and ensure a sustainable economy. Future research can delve into the challenges and opportunities faced by commercial banks when participating in sustainable banking initiatives and explore the impacts of such initiatives on promoting environmental sustainability.

The study solely relies on secondary data sourced from the central bank of Bangladesh and the regulatory frameworks related to sustainable banking. The review of these

frameworks is current and comprehensive. BB has established mandatory rules and regulations for investment in green banking, especially green finance, which all banks are obligated to adhere to strictly. Embracing sustainable banking practices and supporting sustainable projects can enhance the brand value of banks and elevate their global recognition.

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Appendix:**Annex Table 01: Disbursement Trend of Bangladesh Bank (BB)'s Refinance Scheme for Green Product/Initiatives. (Amount in million)**

<i>Green product category</i>	<i>FY 2016</i>	<i>FY 2017</i>	<i>FY 2018</i>	<i>FY 2019</i>	<i>FY 2020</i>	<i>FY2021</i>
Bio gas	84.80	46.60	10.50	4.56	1.24	2.17
Solar home system	114.70	36.30	0.00	0.19	0.45	1.32
Solar irrigation pump	0.60	0.00	0.00	0.00	0.00	27.50
Solar assembly plant	16.30	0.00	0.00	0.00	0.00	0.00
Solar mini-grid	10.00	0.00	0.00	0.00	0.00	27.50
Effluent treatment plant	58.00	179.60	60.00	108.44	132.50	193.14
HHK technology in brick kiln	177.80	10.00	0.00	5.0	100.00	0.00
Vermicompost	1.60	1.30	0.00	0.78	1.26	1.67
Green industry	400.00	0.00	500.00	152.33	198.70	485.00
Safe working environment	35.70	55.30	81.97	39.96	88.10	60.00
Organic manure from slurry	0.20	0.10	0.00	0.00	0.00	0.00
Paper waste recycling	20.00	20.00	0.00	0.00	0.00	0.00
Energy efficient technology	0.00	0.60	13.00	10.00	46.29	200.00
Led bulb/tube manufacturing/ assembly plant	0.00	0.00	0.00	0.00	0.00	24.00
Total	919.7	348.8	665.47	321.27	568.54	994.81
<i>Relative changes in %</i>	<i>133.72%</i>	<i>62.07%</i>	<i>90.79%</i>	<i>51.72%</i>	<i>76.97%</i>	<i>74.98%</i>

(Source: Annual report of Bangladesh Bank (2016-2021))

Annex Table 02: Policy Chronology and Refinancing Initiatives of BB:

2011	<ul style="list-style-type: none"> •Environmental Risk Management (ERM) Guidelines for Banks and Financial Institutions has been issued. •Green Banking Policy Guidelines for Banks has been issued. 	BRPD Circular No.01/2011 & 02/2011
2013	•Policy Guidelines for Green Banking was also issued for the Financial Institutions (FIs) and for the banks scheduled in 2013	GBCSRD Circular No. 04/2013 & Letter No. 05/2013
2014	•From January 2016 onwards minimum target of direct green finance was set at 5% of the total funded loan disbursement/investment for all banks and FIs.	GBCSRD Circular No. 04/2014

2015	<ul style="list-style-type: none"> •Banks and FIs were instructed to form a „Climate Risk Fund“ having allocation at least 10% of their Corporate Social Responsibility budget. 	GBCSRD Circular No. 04/2015
2016	<ul style="list-style-type: none"> •Banks & FIs have been instructed to set up Solid Waste Management System, Rainwater Harvesting and Solar Power Panel in their newly constructed or arranged building infrastructure. •All the banks & FIs must ensure the establishment and activeness of Effluent Treatment Plant (ETP) during financing to all possible clients. 	SFD Circular No. 01/2016 & 03/2016
2016	<ul style="list-style-type: none"> •All banks and FIs to establish Sustainable Finance Unit and Sustainable Finance Committee by abolishing both Green Banking and CSR units. 	SFD Circular No. 02/2016
2017	<ul style="list-style-type: none"> •Guidelines on Environmental and Social Risk Management (ESRM) for Banks and Financial Institutions along with an Excel-based Risk Rating Model have been issued. •A comprehensive list of product/initiatives of Green Finance for banks and FIs has been circulated. 	SFD Circular No. 02/2017 & 04/2017
2018	<ul style="list-style-type: none"> •A new uniform reporting format of Quarterly Review Report on Green Banking Activities has been circulated for Banks & FIs to monitor green banking policy & other regulations and to ensure the quality & uniformity of data provided by Banks & FIs. 	SFD Circular No. 01/2018
2019	<ul style="list-style-type: none"> •Investment by scheduled banks & FIs in any impact fund which is registered under BSEC (Alternative Investment) Rules, 2015 and formed for environment friendly sectors/purposes (resource & energy efficiency, renewable Energy, waste management and treatment, women & child right protection etc.) will be considered as green finance. 	SFD Circular No. 01/2019
2020	<ul style="list-style-type: none"> •From September, 2020 onwards minimum target of green finance was set at 5% of the total funded term loan disbursement/investment for all banks and FIs. 	SFD Circular Letter No. 05/2020
2020	<ul style="list-style-type: none"> •Sustainable Finance Policy for Banks & FIs was issued and new reporting format of Quarterly Report on Sustainable Finance has been introduced. •Sustainability Rating Methodology for Banks & FIs was issued. 	SFD Circular No. 05/2020 & 06/20
2021	<ul style="list-style-type: none"> •Yearly 'Target & Achievement' of Green Finance and Sustainable Finance for Banks & FIs has been fixed. 	SFD Circular No. 01/2021
2021	<ul style="list-style-type: none"> •Target Fixation of Green Finance & Sustainable Finance. •About Sustainability Rating Methodology for Banks & FIs. 	SFD Circular Letter No. 03/2021 & 05/2021

(Source: Quarterly Review Report of BB on Sustainable Finance (July-September 2021))

Annex Table 03: Green Finance by Banks from 2016 to 2021. (BDT in million)

Green finance by Banks	Financial Year					
	2016	2017	2018	2019	2020	2021
Total Green Finance of Banks	27,410.0	34,033.1	67,957.5	98,753.04	105,920.8	97,637.73
Changes in % of banks (Year on year)	3.33%	24.16%	99.68%	45.32%	7.26%	-7.82%

(Source: Authors' compilation using the annual reports of Bangladesh Bank (2016-2021))

Annex Table 04: Product Wise Green Finance by Banks. (BDT in million)

Types of green finance	Financial Year					
	2016	2017	2018	2019	2020	2021
Renewable energy	1,835.5	2,584.4	2,831.7	2,156.08	2,603.83	3,446.44
Energy efficiency	2,405.0	3,120.9	3,156.3	3,798.78	6,726.07	12,506.38
Waste management	4,401.2	8,802.1	35,047.8	25,916.10	9,822.72	7327.55
Alternative energy	324.8	132.7	9.0	83.98	10.08	45.51
Green brick manufacturing	6,552.7	5,293.2	10,429.2	16,899.19	8,766.15	5,821.77
Recycling and recyclable product	4,358.6	6,096.2	3,743.1	11,108.68	8,594.00	11,111.41
Green industry	4,769.8	4,846.6	10,611.7	32,613.52	66,390.18	55,526.29
Misc	2,762.2	3,156.6	2,128.8	6,176.70	3,007.16	1852.38
Total	27,410.0	34,033.1	67,957.5	98,753.04	105,920.8	97,637.73

(Source: Authors' compilation using the annual reports (2016-2021) of BB.)

Annex Table 05: Online Banking and Energy Efficiency by Banks

	Financial Year					
	2016	2017	2018	2019	2020	2021
Total Branches	9,544	10,200	10,058	10,342	10,557	10,824
Online Branches in %	75.1%	72.70%	87.35%	89.45%	91.13%	95.48%
Branches powered by solar energy	493	500	543	569	607	714

(Source: Authors' compilation using the quarterly reports of Bangladesh Bank.)

Annex Table 06: Product wise CSR Activities by Banks: (BDT in million)

CSR activities	Financial Year					
	2016	2017	2018	2019	2020	2021
Total	4,582.7	4704.3	6,120.3	4,606.3	6,058.2	9,120
Growth changes in %	14.45%	2.65%	30.10%	-24.74%	31.52%	50.54%

(Source: Authors' compilation from annual reports of (2016-2021) of Bangladesh Bank.)

