

Impact of COVID-19 on Green Financial Practices of Banks and Financial Institutions in Bangladesh

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Abstract

Bank and financial institutions (FIs) as environmentally friendly and socially responsible institutions plays important role in balancing sustainable economic development and environmental conservation through green financing guided by Bangladesh Bank (BB). COVID 19 has kept an adverse effect on the whole economy and economic system. The aim of this study was to see whether COVID-19 has any impact on the green performance of bank and financial institutions. Secondary data from the Bangladesh Bank was collected through document analysis and a qualitative analysis was made. It was seen that COVID-19 affected most of the sectors of the green activities of bank and Financial Institutions. Time befitting policies should be taken by the government and Bangladesh Bank to get rid of these effects.

INTRODUCTION AND STUDY OBJECTIVES

After revolutionary advancement, climate change is one of the most complicated and burning issues across the world. There are continuous endeavours for

measuring and mitigating human made climate change risk. As a result, several countries around the world have committed towards environmental sustainability to preserve natural resources for accelerating economic growth (Rahman, 2020).

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At this present world, all of the development partners like Banks and financial institutions (FIs) have a common endeavour to swim the amelioration of a country to ensure the living standard of people and boost up the economy in a sustainable manner. Since the economy is associated with sustainable development, there is no way to deny the importance of banks and FIs because they are considered as the backbone of an economic system of a country; the proper functioning and progress of economic activities largely depends on how well and sustainably the financial systems work. The primary role of banks and financial institutions as intermediaries is to promote national savings and to play a pivotal role in balancing sustainable economic development and environmental conservation to establish themselves as environmentally friendly and socially responsible institutions (Faruque & Biplob et al., 2016).

Bangladesh is one of the most vulnerable countries to climate change. Bangladesh's financial sector, as one of the key stakeholders, should play an important role in global development and response to environmental degradation. Banks occupy a unique role in the economy because they have the ability to influence the economic activities of business through their financing in industrial projects which cause maximum carbon emission (Policy Guidelines for Green Banking, 2011). Therefore, the banking sector can act as a bridge between economic growth and environmental protection by promoting environmentally sustainable and socially responsible investment.

The concept of environmental sustainability by banks and financial institutions has given rise to the concept of green banking. Complying with the environment-friendly practices is one of the strong social factors which influence customers' attitude towards the company and purchase of its products or services (Sthapit, Lao-Hakosol, & Sharma, 2018).

Green banking concept has been incorporated in Bangladesh since 2011. Green Banking, according to Institute for Development and Research in Banking Technology, is an umbrella term referring to practices and guidelines that help banks and FIS become more sustainable in terms of economic, environmental, and social aspects (Green Banking Annual Report, IBBL, 2019). Green banking refers to banking operations carried out in such areas and in such a way as to contribute to the overall reduction of external and internal carbon emissions. It aims to make banking operations, physical infrastructure and the use of technology as efficient and effective as possible, with zero or minimal impact on the environment (Singh, 2016). It aims to make banking activities, physical infrastructure, and technology usage as efficient and competitive as possible with having no or little environmental impact. While banks and FIs are considered environmentally friendly entities that do not have a significant 'internal' effect on the environment, but their 'external' impact on the environment through their customers' activities is significant (Alam et al., 2017). That is why the most focussing point of green

practices is to finance to those banking projects and service or trade in a firm or individual which does not pollute the environment in any way.

Green banks, or environmentally conscious banks, not only boost their own organizational values, but also influence other businesses' socially responsible behaviour (Aubhi, 2016). Green practice is a pro-active way that contribute to energy conservation and the prime objective of the green approach is the preservation of natural resources and the environment (Cholasseri, 2016). Bangladesh Bank, the central bank of Bangladesh (BD), has already implemented Green Banking and sustainable practices for all scheduled banks in Bangladesh through policy guidelines for Green Banking, in accordance with global standards (BB Circular No. 02).

Prior studies showed that the intervention of the central bank in the effective implementation of green banking has a high positive impact (Rahman, 2020). Regulatory bodies should promote corporate responsibility, accountability, openness, and consideration of environmental and societal consequences. To encourage compliance, various awards and preferential treatments have been declared by Bangladesh Bank for the compliant banks and FIS (Policy Guidelines for Green Banking, 2011). To protect environmental degradation and ensure sustainable banking practices, Bangladesh Bank instructed 4th Generation Banks to follow a comprehensive Green Banking Policy in a systematic and organized manner in accordance with global norms (BB Cir-

cular No. 05). That is why all the commercial banks have already adopted green banking policy in their internal practice and also formed sustainable finance department to look after the green practices of the respective banks and FIS.

A total of 598 branches and 74 ATM booths out of 7,431 have already been running under solar panel system up to June 2019. Following the comprehensive instructions of BB, the performance of green banking activities of Banks and FIs till December 31, 2019, was experienced an upward trend in green finance. Green finance by banks had been increased by 74.94% than the previous year and it had been increased by 55.55% in case of FIs. The overall picture was very encouraging up to 2019. Few institutions had surpassed the target of green finance compared to the total disbursement (5%). In terms of overall disbursement, only a few institutions had met the green finance baseline (5%).

But suddenly and unfortunately, in 2020, the COVID-19 pandemic ravaged the entire planet, that was never predicted by anyone. The first case of COVID-19 patient in Bangladesh was diagnosed on 8 March 2020 (Hasan & Shaon, 2020). On March 8, 2020, Bangladesh's first COVID-19 patient was diagnosed. There was a rapid response to the pandemic by Bangladesh government through a nation-wide lockdown from 26 March to 30 May of 2020. As a result, the economic activities in all sectors were constrained, causing a fall of Bangladesh's GDP growth to 5.24% in FY20 from 8.15% in FY19 (Islam et al, 2020).

Research Gap

There are substantial studies on green banking practices in Bangladesh (Masukujjaman & Aktar, 2014; Rahman et al., 2015; Islam, 2014; Islam et al., 2014; Roy, 2015; Islam & Hasan, 2015; Ahsan & Uddin, 2015; Rifat et al., 2016; Thombre, 2011; Islam & Das, 2013; Verma, 2012; Shakil et al., 2014; Bihari, 2011; Goyal & Joshi, 2011; Julia & Kassim, 2019; Raisa & Maria, 2019; Ahmad et al., 2013; Meena, 2013; Zhixia et al., 2018). But there is no focus on the impact of COVID-19 on Green Practices of Banks and FIS. There is only one study on impact of COVID-19 on banking sector; that is by Barua (2020a) and Barua (2020b) that reported on the COVID-19 implications for banks: evidence from an emerging economy. Here they focussed on the impact of COVID-19 on the entire banking sector of BD but there is no special focus in Green Performance.

Research Objective

The study primarily aims at analysing the impact of COVID-19 on green financial practices of Banks and Financial Institutions (BFIs).

RESEARCH METHODS

Data Source

The data and necessary information were collected from secondary sources. Data were collected by means of document analysis. As part of content analysis, the published annual reports of Bangladesh Bank (BB) were analysed.

Sampling

This study is confined to the analysis of the impact of COVID 19 on the green performance of banks and financial organizations of Bangladesh. Data were collected regarding 06 State Owned Commercial Banks (SOCBs), 03 Specialised Development Banks (SDBs), 40 Private Commercial Banks (PCBs) and 9 Foreign Commercial Banks (FCBs) and 34 Financial Institutions (FIs) of Bangladesh.

Data Collection

The annual reports of BB of 2020 were analysed to collect the data regarding the green performance of 58 banks and 34 financial institutions which were pertinent to the study objective.

Data Analysis

The study is predominantly qualitative in nature. Data were tabulated and frequency distribution were made. Then a qualitative analysis and judgement was made.

DATA ANALYSIS AND DISCUSSION

The objective of the study is to find out the impact of COVID-19 on the green performance of the banks and FIs of Bangladesh. The study has divulged that during the pandemic the green financial activities were seriously affected in a negative way. The detailed picture of Green Banking activities performed by banks and FIS and the impact of COVID-19 on their performance are given below:

Overview of Green Finance: An effort was made to evaluate the quarterly sanction and disbursement of total finance along with green finance by banks and FIs. It was seen that in the first quarter of 2020 there are more green investment than that of the 2nd quarter and decreased to its least at the 3rd quarter (table 1).

In case of FIs it was also seen that in the 2nd quarter of 2020 the amount of green sanction is less than green disbursement. The trend of green sanction and disbursement are picked up in 3rd quarter of 2020 but in case of the last quarter of 2020 the status of green finance drastically decreased (Figure 1).

Bangladesh Bank set a regulatory target of 05% direct green disbursement of the total funded disbursement. An effort was made to see the compliance standard of the banks and FIs with the regulatory target of BB.

It was seen that in the 1st and 2nd quarter of 2020, the percentage of total green disbursements by banks on total disbursement of funds decreased by 1.41% and 1.59%. It is being seen that the disbursement decreased in the 2nd quarter but decreased the most in the 4th quarter of 2020 (Figure 2). It was also seen that among all banks, PCBs green financial performance is at forefront,

Table 1
Quarterly Sanction & Disbursement of Investment (In Million \$)

Types of Bank		SOCBs	SDBs	PCBs	FCBs (09)	Banks' Total	
Q1: Jan- Mar,2020	TF	D	1254.66	487.28	18815.66	3164.41	23722.02
	GF	S	1416.1	487.43	22806.57	3208.77	27918.88
Q2: Apr- Jun,2020	TF	D	6.68	0.02	217.29	110.39	334.38
	GF	S	16.09	0.015	574.68	177.51	768.29
Q3: Jul- Sep,2020	TF	D	1331.45	556.78	14223.69	2415.10	18527.02
	GF	S	1459.04	651.41	19290.25	3314.72	24715.42
Q4: Oct- Dec,2020	TF	D	9.93	0.018	203.02	81.86	294.71
	GF	S	2.86	0.018	538.90	86.71	628.49
Q1: Jan- Mar,2021	TF	D	1481.35	364.55	18021.90	2450.36	22318.17
	GF	S	1574.98	358.42	26946.10	4701.73	33587.6
Q2: Apr- Jun,2021	TF	D	6	0	203	64	274
	GF	S	7	0	693	95	795
Q3: Jul- Sep,2021	TF	D	3268	640	20175	2807	26891
	GF	S	3287	640	26305	4124	34356
Q4: Oct- Dec,2021	TF	D	76	0	281	96	454
	GF	S	81	0	787	127	995

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs. Here GF stands for 'Green Finance', TF stands for 'Total Finance'; S stands for 'Sanctioned'; D stands for 'Disbursement'.

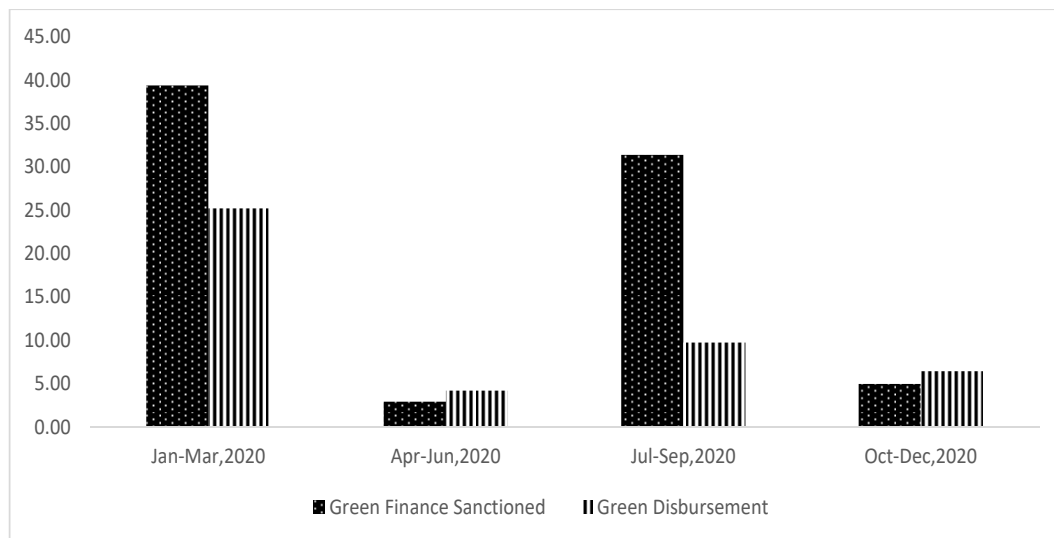


Figure 1: Overview of Green Finance by FIs (In Million \$)

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

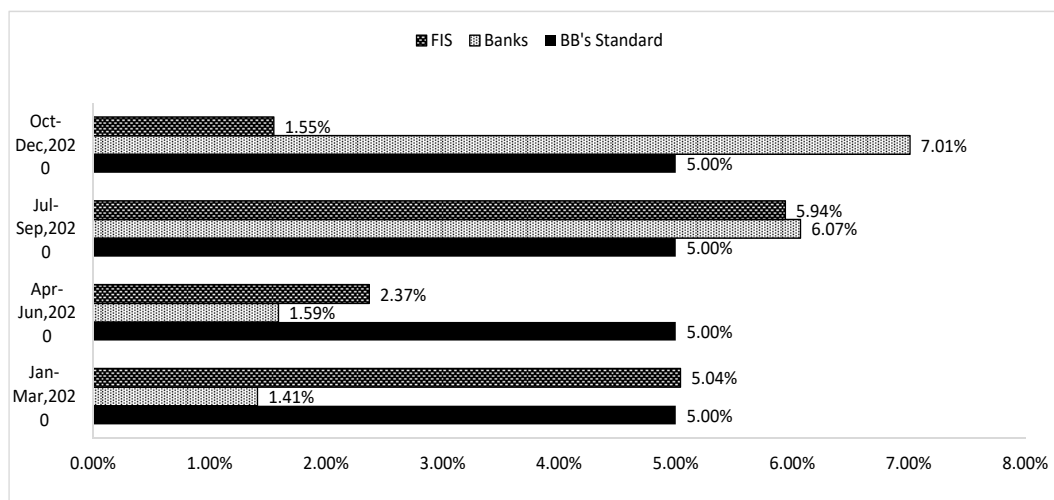


Figure 02: Compliance Chart with BB's Regulatory Standard on Green Finance

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

followed by the FCBs, but the State-Owned Commercial Banks lags far behind than PCBs and FCBs in this regard. On the other hand, SDBs Green Financial Performance is close to zero (Figure 3).

Green Finance in CMSME Industry: The Bangladesh Bank has directed banks and FIS to provide special loan facilities to cottage, micro, small and medium enterprise (CMSMEs). But the number of borrowers in green finance

by banks and FIs decreased in the 2nd and 3rd quarter of 2020 (table 2).

Category-wise Green Finance by Banks and FIs: In the year 2020, 37 banks out of 60 and 7 financial institutions out of 33 had green finance exposure on average. Total green

investment was Tk. 115068.61 million by banks and 3868.9 by FIs in 2020. But in the 2nd quarter of 2020 (April-June, 2020) the total amount of green finance in these specific sector has been tremendously decreased by banks and FIs than that of 1st quarter (January- March, 2020). However, in

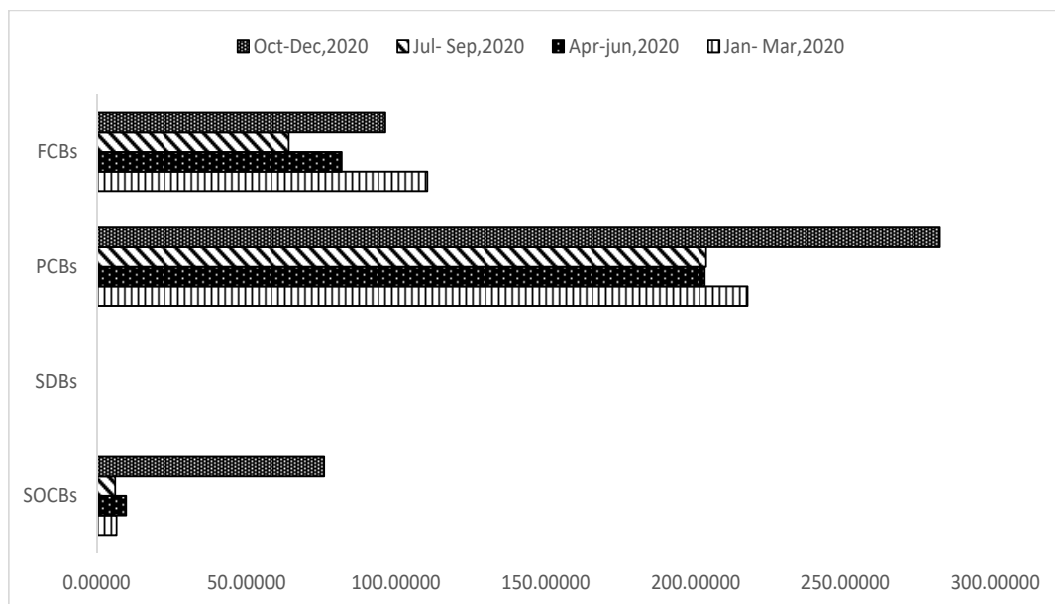


Figure 3: Bank wise Green Financial Performance (in Million \$)

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

Table 2
Number of Borrowers in Green Finance

Borrowers of green finance	Q1: January-March, 2020		Q2: April- June, 2020		Q3: July- September, 2020		Q4: October- December, 2020	
	Banks	FIS	Banks	FIS	Banks	FIS	Banks	FIS
Large	119	19	99	4	106	9	104	9
Cottage and Micro	47	0	19	0	27	0	33	1
Small and Medium	528	17	513	2	382	6	497	10
Others	1	0	17	0	10	0	11	0
Total	695	36	648	6	525	15	645	20

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

Table 3
Category wise Green Finance (In Million \$)

Cate. of GF	RE	EE	AE	LWM	SWM	RRP	GBM	GE	MIS	TOTAL	QT	
Q1: Jan- Mar, 2020	SOCBs	0.01	0.00	0.00	0	0.00	1.15	0.30	5.18	0.03	6.68	
	SDBs	0.01	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.02	
	PCBs	14.5	22.60	0.01	0	28.02	34.87	18.30	98.42	0.57	217.29	
	FCBs	0.58	1.24	0.00	0	2.57	0.05	0.00	105.9	0.00	110.40	334.37
	FIS	5.07	17.57	0.00	0	0.12	0.35	0.84	0.29	0.98	25.22	25.21
Q2: Apr- Jun,2020	SOCBs	0.01	0.000	0.00	0	5.42	0.534	2.316	1.649	0.01	9.934	
	SDBs	0.02	0.000	0.00	0	0.00	0.000	0.000	0.000	0.01	0.018	
	PCBs	0.63	32.7	0.005	0	2.19	17.1	26.7	97.42	6.38	202.8	
	FCBs	1.59	0.54	0.000	0	0.00	0.00	0.00	79.74	0.00	81.87	81.87
	FIS	0.96	0.88	0.000	0	0.00	0.00	0.00	2.356	0.00	4.202	4.20
Q3: Jul- Sep,2020	SOCBs	0.02	0.00	0.00	1.76	0.00	2.31	0.94	1.18	0.03	6.24	
	SDBs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	PCBs	1.38	21.09	0.02	28.12	0.00	28.24	19.24	104.27	1.00	203.35	
	FCBs	0.02	0.59	0.00	0	0.00	0.00	0.00	63.40	0.00	64.01	273.61
	FIS	2.65	6.43	0.00	0	0.00	0.00	0.58	0.00	0.09	9.74	9.74
Q4: Oct- Dec,2020	SOCBs	0.04	2.534	0	1.58	0	6.469	2.301	62.56	0.49	75.978	
	SDBs	0.02	0	0	0	0	0	0	0	0.01	0.0366	
	PCBs	14.5	39.92	0.43	21.7	0	60.9	31.23	108.7	3.94	281.42	453.71
	FCBs	0.01	2.152	0	0	0	0	0	88.66	5.45	96.277	
	FIS	1.19	2.807	0	0.47	0	0.004	0.071	1.179	0.71	6.43	6.427

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

the 3rd quarter of 2020, the amount of green finance increased again and the 4th quarter of 2020 has experienced the highest green investment (table 3).

Here RE stands for renewable Energy, EE stands for Energy Efficiency, AE stands for Alternative Energy, LWM stands for Liquid Waste Management, SWM stands for Solid Waste Management, RRP stands for Recycling & Recyclable Products, GBM stands for Green Bricks Managements, MIS stands for Miscellaneous and QT stands for Quarter Total.

Preferential Green Sectors: In case of identifying the priority sectors it was seen that all the banks have the highest investment in the Green Establishment Sector in each quarter (table 4). In the 1st and 2nd quarter Banks have no investment over Liquid Waste Management sector but the next two quarters have seen significant growth in this sector. Although banks have invested significantly in the Renewable Energy Sector in the 1st quarter of 2020 but the amount of investment in the next two quarter has declined drastically (table 4).

Here, SGF stands for 'Sectors of Green Investment', SI Stands for 'sectorial investment', TGI stands for 'Total Green Investments', % of GI Stands for '% of Green Investments', RE stands for 'renewable Energy', EE stands for 'Energy Efficiency', AE stands for 'Alternative Energy', LWM stands for 'Liquid Waste Management', SWM stands for 'Solid Waste Management', RRP stands for 'Recycling & Recyclable Products', GBM stands for 'Green Bricks Managements', MIS stands for 'Miscellaneous' and QT stands for 'Quarter Total'.

Here, SI Stands for sectorial investment, TGI stands for Total Green Investments, % of G. Inv. Stands for % of Green Investments, RE stands for renewable Energy, EE stands for Energy

Efficiency, AE stands for Alternative Energy, LWM stands for Liquid Waste Management, SWM stands for Solid Waste Management, RRP stands for Recycling & Recyclable Products, GBM stands for Green Bricks Managements, MIS stands for Miscellaneous and QT stands for Quarter Total.

It was also seen that the highest investment in the 1st quarter was in the Energy Efficiency Sector (table 5). In this quarter, FIs has made investments in almost all sectors except Alternative Energy and Liquid Waste Management Sector. But in the next two quarters, there has been a terrible collapse of investment in different sectors, even no investment has been made in four sectors and the amount of money invested in the remaining five sectors is comparatively less (table 5).

Table 4

Identification of Quarterly Preferential Green Financing Sector by Bank (In Million \$)

	SGF	RE	EE	AE	LWM	SWM	RRP	GBM	GE	MIS
Q2: Apr- Jun, 2020	SI	15.11	23.84	0.01	0.00	30.59	36.07	18.61	209.55	0.60
	TGI	299.02	299.02	299.02	299.02	299.02	299.02	299.02	299.02	299.02
	% of GI	5.05%	7.97%	0.00%	0.00%	10.23%	12.06%	6.22%	70.08%	0.20%
Q2: Apr- Jun, 2020	SI	2.25406	33.2596	0.0050	0	27.4053	17.604	29	178.8	6.386
	TGI	294.714	294.714	294.71	294.71	294.715	294.71	294.7	294.71	294.7
	% of GI	0.76%	11.29%	0.00%	0.00%	9.30%	5.97%	9.84%	60.67%	2.17%
Q3: Jul- Sep, 2020	SI	1.422827	21.6821	0.0153	29.888	0	30.549	20.17	168.85	1.034
	TGI	273.608	273.608	273.60	273.61	273.609	273.61	273.6	273.61	273.6
	% of GI	0.52%	7.92%	0.01%	10.92%	0.00%	11.17%	7.37%	61.71%	0.38%
Q4: Oct- Dec, 2020	SI	14.6047	44.6080	0.4270	23.324	0	67.364	33.53	259.96	9.818
	TGI	453.714	453.714	453.71	453.71	453.714	453.71	453.7	453.71	453.7
	% of GI	3.22%	9.83%	0.09%	5.14%	0.00%	14.85%	7.39%	57.29%	2.16%

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

Climate Risk Fund: Climate Risk Fund, established under Environment-Friendly Banking as part of CSR, is used for activities such as environmental pollution prevention, deterioration, mitigation, and adaptation to climate change issues, carbon emission reduction, disaster management (prevention and rehabilitation), and so on. It was seen that in the 1st and 2nd quarter of 2020, the amount of fund utilization by

banks is very lower than the following two quarters. In case of FIs there is no utilization of fund in the 2nd and 3rd quarter of 2020 but in the 4th quarter of 2020, a little amount of fund was utilized (table 6).

Environmental and Social Risk Management (ESRM): The ESRM Guideline's core objective in considering Green Banking Policy is to help banks and financial institutions

Table 5
Identification of Quarterly Preferential Green Financing Sector by FIS (In Million \$)

	SGF	RE	EE	AE	LWM	SWM	RRP	GBM	GE	MIS
Q1: Jan-Mar, 2020	SI	5.0721	17.5656	0	0	0.1179	0.354	0.836535	0.294638	0.978197
	TGI	25.219	25.2185	25.219	25.22	25.219	25.22	25.2185	25.2185	25.2185
	% of GI	20.11%	69.65%	0.00%	0.00%	0.47%	1.40%	3.32%	1.17%	3.88%
Q2: Apr-Jun, 2020	SI	0.9634	0.88339	0	0	0	0	0	2.355713	0
	TGI	4.2025	4.20247	4.2025	4.202	4.2025	4.202	4.202473	4.202473	4.202473
	% of GI	22.92%	21.02%	0.00%	0.00%	0.00%	0.00%	0.00%	56.06%	0.00%
Q3: Jul-Sep, 2020	SI	2.6458	6.42967	0	0	0	0	0.577998	0	0.089612
	TGI	9.7431	9.74307	9.7431	9.743	9.7431	9.743	9.743073	9.743073	9.743073
	% of GI	27.16%	65.99%	0.00%	0.00%	0.00%	0.00%	5.93%	0.00%	0.92%
Q4: Oct-Dec, 2020	SI	1.1928	2.80741	0	0.468	0	0.004	0.070527	1.179384	0.707631
	TGI	6.43	6.43	6.43	6.43	6.43	6.43	6.430004	6.430004	6.430004
	% of GI	18.55%	43.66%	0.00%	7.28%	0.00%	0.06%	1.10%	18.34%	11.01%

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

Table 6
Utilization of Climate Risk Fund (in million \$)

Institutions	Q1: January-March, 2020	Q2: April-June, 2020	Q3: July-September, 2020	Q4: October-December, 2020
Banks	1.570	1.829	4.589	3.541
FIS	0.003	0.000	0.000	0.001

Note: Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

Table 7
Environmental and Social Risk Rating (in million \$)

Types of Banks			SOCBs	SDBs	PCBs	FCBs	Banks' TotalFIS	
Q1: Jan-Mar, 2020	No. of Rated Projects Financed		32.26	0.00	144.91	1.27	178.44	13.67
	AD in Rated Projects		84.27	0.00	5549.39	185.40	5819.05	413.08
Q2: Apr-Jun, 2020	No. of Rated Projects Financed		23.51	0.00	102.94	1.68	128.14	3.97
	AD in Rated Projects		151.58	0.00	4051.98	282.57	4486.12	371.20
Q3: Jul-Sep, 2020	No. of Rated Projects Financed		26.58	0.00	133.68	1.97	162.22	8.86
	AD in Rated Projects		111.64	0.00	5685.92	299.04	6096.60	472.97
Q4: Oct-Dec, 2020	No. of Rated Projects Financed		14.54	0.00	184.11	2.16	200.81	14.94
	AD in Rated Projects		116.35	0.00	5526.26	475.15	6117.75	608.06

Note: Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

understand how to integrate environmental and social (E&S) risks into overall credit management and implement effective risk reduction steps so that they can avoid investing in high E&S risks. It was seen that the number of project ratings in 2nd quarter has decreased a lot and the amount of disbursement under rated projects has also decreased. Although the number of rated projects and the amount of disbursement increased in the next quarter but the growth rate in this quarter is less than the 1st quarter (table 7).

Here, AD in rated projects stand for Amount Disbursement in Rated Projects.

In-house Environmental Management: BB has taken a range of rigorous measures to make its internal operations more environmentally sustainable, energy efficient, and technologically advanced. In evaluating the in-house environmental management status of banks and FIs it was seen that the number of branches

and the number of ATM booths of SOBCs and PCBs have increased in each quarter. The number of branches of FCBs increased the most in 3rd quarter. The number of solar powered branches remained unchanged in the First two quarters but in case of PCBs it has started to increase from 3rd quarter. In 2020, SOBCs has no solar agent outlet and the number of ATM booths powered by solar energy is much less. In case of SDB's in-house environmental performance remained unchanged in each quarter of 2020. In case of FIS the number of branches has not changed much in 2020. But in the last quarter of 2020, the number of solar powered branches decreased from 3 to 1 (table 8).

Online Banking: Green banking policy has pursued the banks to establish online branches. It facilitates users to conduct financial transactions via internet. It was seen that the number of branches of SOCBs, PCBs, and FCBs is increasing except the Specialised Development Bank that means the area coverage of SDBs is unchanged

Table 8

In-house Environmental Performance of Banks and FIS

Types of Banks		SOCBs	SDBs	PCBs	FCBs	FIS
Q1: Jan- Mar, 2020	No of Branches	3778	1421	5290	64	280
	No of Solar Powered Branches	76	5	513	5	3
	No of ATM Booths	248	6	6981	140	-
	No of Solar powered Booths	2	0	47	11	-
	No of Agent Outlet	245	0	27494	0	-
	No of solar powered Agent Outlet	0	0	6	0	-
Q2: Apr- Jun, 2020	No of Branches	3779	1421	5293	64	281
	No of Solar Powered Branches	76	5	521	5	3
	No of ATM Booths	249	6	7080	140	-
	No of Solar powered Booths	2	0	46	10	-
	No of Branches with Rainwater Reusing	-	-	3	4	-
	No of Branches with Solid Waste Disposal	-	-	241	7	7
Q3: Jul- Sep, 2020	No of Branches	3788	1421	5321	66	280
	No of Solar Powered Branches	76	5	524	5	3
	No of ATM Booths	252	6	7427	138	-
	No of Solar powered Booths	2	0	20	10	-
	No of Agent Outlet	280	0	30571	0	-
	No of solar powered Agent Outlet	0	0	16	0	-
Q4: Oct- Dec, 2020	No of Branches	3793	1421	5442	66	280
	No of Solar Powered Branches	77	5	525	5	1
	No of ATM Booths	261	6	8563	137	-
	No of Solar powered Booths	2	0	19	10	-
	No of Agent Outlet	287	0	33517	0	-
	No of solar powered Agent Outlet	0	0	17	0	-

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIS.

but their online coverage is increasing and mostly increased in the 4th quarter of 2020. FCBs is in a good position with 100% online branches. The overall No. of branches with online coverage of all banks is gradually increasing (table 9).

Training, Promotion and Disclosure:

As per the BB guidelines the banks

and FIS have to arrange training programmes for their employees. It was seen that the training programme for raising awareness only arranged in the 1st quarter of 2020. Here it is being seen that the huge number of employees joined this programme. But in case FIS the number of training programmes and number of employees joined is very few (table 10).

Table 9
Automation towards Green Banking

Types of Banks		SOCBs (06)	SDBs (03)	PCBs (42)	FCBs (09)	Grand Total
Q1: Jan-Mar, 2020	No of Total Branches	3778	1421	5290	64	10553
	No of Branches with Online Coverage	3707	517	5289	64	9577
Q2: Apr-Jun, 2020	No of Total Branches	3779	1421	5293	64	10557
	No of Branches with Online Coverage	3708	557	5292	64	9621
Q3: Jul-Sep, 2020	No of Total Branches	3788	1421	5321	66	10596
	No of Branches with Online Coverage	3716	678	5311	66	9771
Q4: Oct-Dec, 2020	No of Total Branches	3793	1421	5442	66	10722
	No of Branches with Online Coverage	3721	1113	5423	66	10323

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs

Table 10
Training programme for Green Practice

Banks and FIS	programmes Arranged	Employees Participated	Customers Participated
SOCBs (06)	11	277	0
SDBs (03)	2	80	0
PCBs (41)	63	2567	10
FCBs (09)	3	87	0
Total	79	3,011	10
FIs (33)	3	68	1

Note: Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

In table 11 it is being seen that in the 2nd quarter of 2020, there is no disbursement from any support funding scheme. Although there is disbursement in the 3rd quarter of 2020, the amount is less than in the 1st quarter and the number of projects under disbursement is less. In the 4th quarter, the disbursement of green products/ initiatives from BB's Refinance Scheme is highest but the amount of disbursement is less in other two scheme.

DATA ANALYSIS AND DISCUSSION

The objective of the study is to find out the impact of COVID-19 on the green performance of the banks and FIS of Bangladesh. The study has divulged that during the pandemic the green financial activities were seriously affected in a negative way. It was seen that the green investment has decreased in the 2nd and 3rd quarter of 2020 (Table-01). This may be due to COVID-19 which led to a

Table 11

Support Funding Schemes of BB for Green Finance (in Million \$)

Refinance scheme of BB	Q1: January- March, 2020		Q2: April- June, 2020	Q3: July- September, 2020		Q4: October- December, 2020	
	Amount	No. of Project		Amount	No. of Project	Amount	No. of Project
Financed for Eco-Friendly Products	2.3345	6		1.0178	4	3.8625	4
Financed for Green Initiatives invested by Islamic Banks & Financial Institutions	0.2853	6	No Disbursement	0.1894	5	0.1035	5
Financed from Green Transformation Fund (GTF)	0.2060	2		0.2651	2	0.0066	1

Note. Compiled from Bangladesh Bank's Quarterly Review Report on Green Banking Activities of Banks and FIs.

nationwide lockdown from 26 March to May 30 of 2020 that affected aggregate demand, production, supply, trade and economic activities. As a result of the unprecedented, negative growth of the global economy, Bangladesh's economic growth slowed to 5.24% in FY20 from 8.15% in FY19, and foreign demand (exports) shrank dramatically in FY20 (Bangladesh Bank, 2020). The result agrees with that of previous studies (Barua, 2020a, 2020b; Chen, Qian & Wen, 2020; Coibion, Gorodnichenko & Weber, 2020; ILO, 2020, World Bank, 2020a; OECD, 2020a; Baldwin & de Mauro, 2020).

In case of Financial Institution, a heavy fluctuation of the amount of green

sanction and green disbursement is being seen (Figure1). The reason for this may be COVID-19. Because the year 2020 has passed through the whole of COVID-19 and all economies activities, demand, supply, production, trade has been hampered and contracted for which the amount of loan given by FIS decreased. Because the deteriorated business conditions kept the traders out of their usual practice of borrowing and repaying fund from banks and FIs. Figure 1 shows that there were higher disbursements than sanctions which may be due to lower loan sanctions to avoid liquidity crisis in the COVID situation. Although the sanction increased in the following quarters for BB's timely initiatives, but

the disbursement did not increase much severe COVID situation that disrupted public life consequently people are demotivated to take lone.

Bangladesh bank set a regulatory target of 5% direct green disbursement over total funded disbursement. But it is being seen that during pandemic in 2020 the rate of green disbursement by banks decreased much in the moment before lockdown and during lockdown in BD (Figure 2). But in case of FIS, there has been a terrible fluctuation of green finance throughout the year. This downward and fluctuating tendency may be due to COVID because of its devastating impact on public life, business and economic activities.

Total amount invested as green finance has been Tk. 115068.61 million by banks and 3868.9 by FIs in the year of 2020 (Bangladesh Bank). It is being seen that among all banks, the green financial performance of PCBs and FCBs is far better than SOCBs and SDBs (Figure 3). This may be due to COVID because, the uncertainty of loan repayment can demotivate the borrowers to take loan from banks and FIS. Though all the banks (60 banks) have performed their functions through the COVID pandemic, the overall green financial performance of PCBs and FCBs is much better than that of SOCBs. The performance of SOCBs may be for their non-compliance with the green policy given by BB.

The Bangladesh Bank has directed banks and FIs to provide special and soft loan facilities to some green sectors like cottage, micro, small and medium enterprise (CMSMEs). The number of

loaners of banks and FIs in green finance decreased in the 2nd and 3rd quarter of 2020 (Table 2). This may be because, banks and FIs reduced lending to the CMSMEs for the possibility of liquidity shortage and default loans due to the COVID pandemic. Later on, the number of loaners increased at the 4th quarter of 2020 which may be for the responsive actions taken by BB.

It was seen that in the 2nd quarter of 2020, the total amount of green finance in green specific sectors have been tremendously decreased by banks and FIs (Table 3). This may be due to the pandemic, because nationwide lockdown was imposed to protect the nation from the deadly epidemic of COVID-19, during which all production oriented and processing factories were closed, resulting in reduced product supply, increased product stocks and reduced demand, for which green sector wise finance may be reduced.

It was seen that the amount of green investment by banks and FIs was good enough before lockdown in the 1st quarter of 2020 in Bangladesh. However, during the lockdown in the 2nd quarter and after lockdown in 3rd quarter of 2020, the amount of sector wise green investment decreased, even in some sectors no investment was seen (Table 4 and 5). This is an impact of COVID 19.

Climate Risk Fund under the Environment Friendly Banking as a part of CSR used for the activities related to prevention of environmental crisis. This fund used as donation/grant as well as investment at reduced rate of

return. The amount of fund utilization by banks is very lower in the 1st two quarter of 2020, but in case of FIS there is no utilization of fund in the 2nd and 3rd quarter of 2020 (Table 6). As the prevalence of COVID-19 increased, banks and FIS changed the way they work on charity. In other words, they increased the amount of grant in the health sector that could be the reason for lower utilization of climate risk fund as grant.

It is being seen that the number of project ratings and amount disbursement under rated projects have decreased a lot in the 2nd quarter of 2020 (Table 07) as COVID terribly affected the whole economic system which goes in agreement with the findings of earlier studies (Lagoarde-Segot & Leoni, 2013; Larbi-Odam et al., 2020; Cecchetti & Schoenholtz, 2020; Goodell, 2020; World Bank, 2020c, 2020d; Stiller & Zink, 2020). It is being seen that COVID has no impact on branch and ATM booth expansion in case of both public and private commercial bank and in-house environmental performance (Table 8).

Green banking policies have pursued banks to open online branches. It facilitates users to conduct financial transactions via internet. The number of online branches of SOCBs, PCBs, and FCBs is increasing except the SDB (Table 9). This may be due to COVID-19 because COVID forced online transaction.

Banks and FIS encouraged and influenced its employees and clients to comply with the environmental regulations. BB ordered to arrange green banking training and capacity building programme for the employees and clients

at least once in every quarter. The training programme for raising awareness was arranged only in the 1st quarter of 2020 (Table 10). Since March 26, lockdown has been imposed countrywide for which banks and FIs may not have been able to arrange this training programme.

To broaden the green financing avenue BB introduced refinance scheme or support funding scheme for green finance. It is being seen that in the 2nd quarter of 2020, there is no disbursement from any support funding scheme. Although there is disbursement in the 3rd quarter of 2020 but the amount is less (Table 11).

From all the above green performance, it can be seen that most of the fluctuations in the green performance fell in the 2nd and 3rd quarters of 2020, more specifically when the first COVID case was identified and lockdown declared was in Bangladesh. Since COVID is a global pandemic, considering the adverse consequences of this pandemic, BB has been adopting responsive policy measures since April 2020 to reduce the devastating impact of COVID. The government has proposed a series of stimulus packages totalling Tk. 1.03 trillion (approximately 3.6 percent of GDP) for increasing public spending (Policy Note 2001). The overall expenditure framework was revised to make sufficient allocations available to mitigate the adverse impacts of the COVID-19. Moreover, with a view to mitigate increased risks of poverty and inequality, enhance business activities, BB incorporated policies for social safety nets, cash transfers, employment generation programmes under annual

development programmes (ADP), various types of tax exemption or tax benefit in income tax, customs and value-added tax (VAT) in the revenue management framework (Policy Note: PN 2001). The fiscal deficit is projected to increase slightly to 6 percent in FY21 from 5.5 percent in the revised budget for FY20 (Budget Speech, 2020-21).

CONCLUSION AND IMPLICATIONS

Bangladesh is one of the highly risked climate vulnerable countries due to her physiographic location, socio-economic infrastructure and dependency on natural resources (Climate Change Cell, Bangladesh). The Global Climate Risk Index ranked Bangladesh seventh among climate-vulnerable countries in its annual report of 2020 (Imam, 2019). Since banks and FIS are one kind of driving force of the economy, green practices by banks and FIS is much needed to mitigate the pressure of environmental pollution. In Bangladesh

the overall green practice is gradually improving. But suddenly, the entire economy has been collapsed by the effect of COVID-19 pandemic. The obvious effect has been seen in the green activities of banks and FIs.

By taking appropriate actions the green financial situation has become somewhat normal. This pandemic is a lesson not only for Bangladesh but also for the entire world, a reminder for human kindness towards nature which is forcing us to accept that along with technical and economic advancement, the issue of ensuring natural sustainability should also be emphasized. As a backbone of the economy banks and FIS should focus more on green practice because every tiny initiative of green practice taken today will construct a sustainable greener future for the betterment of global environment. So, banks should give more emphasis on the green practices for ensuring environmental and economical sustainability.

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