Banking Review Series 2021

A Compilation of the Review of Banking Activities for the Year 2020

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Banking Activities for the year 2020

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Message from Director General

Bangladesh Institute of Bank Management (BIBM) has introduced a number of review workshops in its annual academic calendar to review overall activities of different functional areas of banks (Credit, Trade Services, Treasury, Internal Control & Compliance, Information Technology, Human Resources, Islamic Banking, Sustainable Banking Activities and Regulatory Reporting Requirements). In these review workshops, keynote papers are prepared by the research teams comprising the faculty members of BIBM and experienced bankers from different banks. The main objective of these reviews is to highlight analytically the overall activities and to critically point out major challenges of different functional areas of banks. The research papers are finalized after accommodating the practical problems and the probable options of remedy raised in the discussion in review workshops with the concerned heads of departments of different banks.

I am also thankful to the Executive Editor, Mohammed Sohail Mustafa, Associate Professor and Director (Training & Certification Program), and the Associate Editor, Dr. Md. Shahid Ullah, Associate Professor of BIBM for the timely publication of the Banking Review Series 2021.

The present compilation, the tenth of the Banking Review Series, combines five review papers. We hope it would attract attention of not only bankers, but other professionals like credit analyst, economists, development practitioners as well as the academic community. BIBM would also welcome comments, critiques and suggestions on the themes contained in this review-based publication.

Dr. Md. Akhtaruzzaman
Director General

Foreword

The "Banking Review Series 2021", an annual publication of Bangladesh Institute of Bank Management, compiles Review Workshop Papers addressing the five functional areas of banks (Credit, Trade Services, Treasury, Internal Control and Compliance, Information Technology). As a part of capacity development program of BIBM on a continuous basis, the review studies are undertaken to make a comparative analysis between the study period and preceding year. Our objective of the studies is to identify the cause and effects of the changes happened during the periods in the aforementioned five functional areas, and to inform it to the stakeholders. From our past experience, it was observed that the banking community considers this Banking Review Series as an Operational Manual and they usually preserve it in their desk to take any vital decision.

As per the norms of BIBM, the research team is constituted of faculty members of BIBM along with experienced Central Bankers and Commercial Bankers. A draft key-note paper was prepared and presented before the distinguished panelists and experienced bankers of relevant desk. The papers then finalized after incorporating the valuable comments of the learned panelists and thoughtful remarks of participating bankers.

BIBM is always grateful to the honorable Chairman of BIBM Executive Committee, and Deputy Governor of Bangladesh Bank, Mr. Ahmed Jamal for inaugurating the workshops along with his valuable opening remarks.

BIBM is thankful to all the learned panelists, especially Executive Directors of Bangladesh Bank, Managing Directors and CEOs of different Commercial Banks for giving us their valuable time and comments which enrich the quality of our study.

Our sincere and humble thanks go to Dr. Md. Akhtaruzzaman, honorable Director General of BIBM for his continuous guidance, support, and encouragement. Under his dynamic leadership, it becomes possible to publish the "Banking Review Series" within in the calendar year for the first time.

We are also thankful to all concerns who supported us to publish the "Banking Review Series 2021" on time.

We expect constructive suggestions from our readers and stakeholders on our way to serve the banking sector even better in the future.

Mohammed Sohail Mustafa, *CFA*
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Contents

Paper One

CREDIT OPERATIONS OF BANKS

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List of Abbreviations

ACD	Agricultural Credit Department
ADB	Asian Development Bank
ADR1	Advance to Deposit Ratio
ADR2	Alternative Dispute Resolution
AoA	Articles of Association
BB	Bangladesh Bank
BDT	Bangladeshi Taka
BIBM	Bangladesh Institute of Bank Management
BIDA	Bangladesh Investment Development Authority
BMRE	Balancing, Modernization, Rehabilitation and Expansion
BRPD	Banking Regulatory and Policy Department
CAGR	Cumulative Average Growth Rate
CC	Cash Credit
CC(Hypo)	Cash Credit (Hypothecation)
CDR	Credit to Deposit ratio
CIB	Credit Information Bureau
CMSMs	Cottage, Small and Medium Enterprises
COVID	Coronavirus disease
CRGS	Credit Risk Grading Score Sheet
CRM	Credit Risk Management
CRR	Cash Reserve Requirement
ECAI	External Credit Assessment Institution
EDF	Export Development Fund
ESRM	Environmental & Social Risk Management
FCBs	Foreign Commercial Banks
FIs	Financial Institutions

FY	Fiscal Year
GDP	Gross Domestic Product
GNPL	Gross Non-Performing Loan
HHI	Herfindahl-Hirschman Index
IDCP	Interest During Construction Period
IDR	Investment to Deposit Ratio
ICRR	Internal Credit Risk Rating
ICRRS	Internal Credit Risk Rating System
L/C	Letter of Credit
MFIs	Microfinance Institutions
MIS	Management Information System
MoA	Memorandum of Association
NBFI	Non-Bank Financial Institutions
NGO	Non-governmental organizations
NNPL	Net Non-Performing Loan
NPL	Non-Performing Loan
PCBs	Private Commercial Banks
RIPO	Repurchase Agreement
RM	Relationship Manager
RMG	Readymade Garments
SAMD	Special Asset Management Department
SBs	Specialized Banks
SME	Small and Medium Enterprise
SMESPD	SME & Special Programs Department
SOCBs	State-Owned Commercial Banks
WC	Working Capital

Credit Operations of Banks

1. Introduction

The COVID-19 pandemic has impacted Bangladesh's economy badly like other countries since its beginning in China in the last quarter of 2019. GDP growth rate happened 5.2 per cent in FY 2020, whereas it was 8.2 per cent in FY 2019 (Bangladesh Bank Quarterly, October -December, 2020). This sloth performance occurred because of declining growth performance of agriculture sector from 3.92 percent to 3.11 per cent, industrial sector from 12.67 per cent to 6.48 per cent and service sector from 6.78 per cent to 5.32 per cent in 2020 compared to 2019. In the external front, both exports and imports decreased by 17.1 percent and 8.6 per cent respectively in 2020. But continued strong remittance inflows throughout the COVID period were a matter of satisfaction to the authority.

Not surprisingly, like the real economy, COVID has affected the banking sector almost in the same scale. The banking sector noticed sluggishness in terms of regular activities. The growth in advances decelerated to 8.2 percent at the end of December FY2020 from 9.6 percent at the end of September FY20. However, the bank‘s deposits growth rate reached 13.1 percent in FY2020 compared with 12.4 percent growth in the previous quarter. Advance deposit ratio (ADR) accounted for 72.7 percent at the end of FY 2020 on the back of permitted limit 87 per cent for conventional banks and 92 per cent for Sharia- based banks. The aforesaid lower AD ratio created a huge surplus of liquidity in the banking sector.

Bangladesh Bank's policy measures under the stimulus packages of the government, expectation of improving the COVID-19 situations due to the initiating vaccination, reopening of businesses in export destination countries reinstated business confidence at the end of 2020. This in turn created optimism in the Banking sector too. However, after hitting the second wave of COVID -19 in the first week of April, 2021, concern of business community, bankers and policy makers was increased. Experiences of the first wave assisted us to undertake appropriate steps to address the uncertainty of the economy caused by the second wave. However, current profound confidence level of all stake holders due to improved situation of COVID has created ray of hope for the better economy in future.

At this ongoing ups and downs moment of the economy as well as the banking sector, BIBM has undertaken an initiative to review the credit operation of banks in 2020 consecutively for the tenth time.

1.2. Chapter Plan

The first chapter showed introduction, chapter plan, and data and methodology. Afterwards, review of recent issue-based literature relating to credit operations, discussion on regulatory and supervisory requirements of BB , examination of the credit portfolio of banks, measurement of degree of applying norms of CRM and ICRRS manual in credit operations in banks, discussion on utilization of stimulus package , examining selective key issues in credit operation in banks , studying practical cases for pointing out causes of success/ failure in credit operation had been covered in sequence. A brief section visualized to what extent issues raised in the 2019 review were addressed in credit operation of 2020. Finally, the paper identified challenges observed in credit operations in 2020 along with possible solutions.

1.3. Data and Methodology

The review was conducted depending on the primary as well as secondary data. For collecting primary data, a semi structured questionnaire was sent to all scheduled banks. However, only 30 banks consisting of SOCBs, PCBs, SBs and FCBs provided primary data. Secondary data sources included various publications of Bangladesh Bank like BB's Annual Reports, Economic Trends, BB's Bulletin, circulars and Scheduled Banks Statistics. Data for 2018, 2019 and 2020 were used in the report. Ratios, compound annual growth rate (CAGR) as well as tabular and graphical techniques were applied. Three practical cases relating to credit operations were studied to get an insight into the causes for success and failure of lending. It is expected that in the dissemination program of "Review of Credit Operation in Banks 2020', discussants and participants will give valuable inputs. The paper will be finalized by contemplating the opinions of discussants and participants.

2. Brief Review of Issue Based Recent Literature

Issues	Reviewed Literature
Covid 19 and Credit operation in Bank	The exact extent and trajectory of Covid-19 is uncertain. The stakeholders of the financial system should devise forward-looking strategies in their credit operation to cope with this new-normal situation (Kabir, 2021). He advises banks to focus on the implementation of the incentive packages, especially the stimulus package for the small, micro and medium enterprises announced by the government.
NPL and Frustration of the Good Borrowers	The continuous accumulation of defaulted loans creates a bad economic culture. It causes upward trends in higher

	lending interest rates. If, in addition, the defaulted borrowers are given special concessions as in recent times, the law abiding 'good' borrowers feel frustrated. Some of them may even get to deliberate defaults (Farashuddin, 2020).
Governance in Banks and Appraisal of Credit Proposal.	Governance in the banks leaves a lot to be desired. Loans are often given as a result of political influence. In many cases, loans are given to friends or relatives without paying due attention to the prospects of repayment on the basis of objective analysis of the loan proposal. In such cases, as the loan recipients fail to repay as per terms of the agreements, excessive generosity is shown in respect of recovery. The resultant high rate of default is also an important cause for high rate of interest. In the context of governance, it should also be mentioned that the recent decision to allow four members of a family on the Board and enhance their tenure runs counter to sound governance (Islam 2020).
Loan scams, ethics of board members and management , and professional competence of credit officers and executives	Today, not only the technique of fraudulent practices has changed but also the heightened aspirations of many stakeholders make the banking system vulnerable. Bankers in collusion with adventurous and influential borrowers did threaten for the entire economy. Such a situation made ethical behavior more difficult and challenging. Consequently, the need is now heightened for promoting ethics in banking (Kabir, 2019). To an extent default is caused by the lack of adequate professional competence of bank staff responsible for evaluation of loan proposals. Here again the excessive number of banks aggravates the problem because banks are forced to engage in unhealthy competition to recruit professional staff from the limited poll (Islam, 2020). There exists a growing list of identified perpetual loan defaulters. They happen to be large industrial conglomerates with heavy concentration of borrowed funds from selected state-owned banks. Things started going wrong from the stage of assessing their credit worthiness, which should be done carefully based on the net worth (total assets- total

	liabilities). The net worth in itself is highly questionable in Bangladesh due to deficiencies in relevance, reliability, timeliness and completeness of given information. Some bank branch managers purposefully act on such flimsy information to grant loans for side payments. Moreover, the big borrowers use personal connections with bank officials, influence and external pressures to obtain loans. In many instances, their defaulting on loans is intentional. Later on, they manage to get bad ones rescheduled seeking refuge in the loopholes in the regulatory framework and selected overly accommodative judicial courts. The fraudulent, corrupt and cunning corporate borrowing culture, as developed over decades, jeopardizes the health of the banking sector to the detriment of the realization of the "Sonar Bangla" vision of the Father of the Nation (Rahman , 2020).

3. Changes in Regulatory and Supervisory Requirements for Credit Operations of Banks in 2020- 2021.

Bangladesh Bank issued a number of prudential regulations, guidelines and circulars in 2020-2021 to ensure smooth flow of credit to the shattered economy induced by COVID 19. Relevant regulations, guidelines and circulars provided during this period are summarized below.

Date/ Period	Circular No.	Title	Content
April – June 2020	Various circulars	**Stimulus Packages** by the government/ Bangladesh Bank	Stimulus packages for export sector including RMG, working Capital loan facility for large industries and CMSMEs, import sector, pre-shipment credit refinance scheme, health care professionals , front liner public servants, food aid , social safety net programs , agriculture sector, low interest credit for poor farmers , etc were announced to address situation emerged from COVID 19.

April-June, 2020	Various Circulars	Monetary & Exchange Rate **Policy supports**	Policy supports for relaxed CRR, REPO, reverse REPO, bank rate, security buy back period, advance deposit ratio, term REPO, LC usance period, export development period, loan of EDF were extended by Bangladesh Bank after outbreaking covid 19 .
April - June, 2020,	Various circulars	**Refinance Schemes**	Refinance schemes for agriculture sector, CSMEs, large industry and service sector, sustainable finance, low-income professionals, farmers and micro businessmen and others[1] were extended through either broadening earlier facilities or announcing newly with more amount of funds and subsided rates of interests.
29/06/2021	BRPD Circular Letter No: 31	Collection and Preservation of Statutory Audit Report and Audited Financial Statements in Loan Approval and Renewal	As per Financial Reporting Act 2015, Section 2(8), banks and financial institutions will collect and preserve the Audited Financial Statements and Statutory Audit Report from the borrowers. Apart from Large and Medium industries, this policy will now be also applicable for Cottage (C), Micro (M), and Small (S) industries within January 01, 2023.
29/07/ 2021	ACD Circular No. 01	**Agricultural and Rural Credit** Policy and Program for Fiscal Year 2021-2022	In the fiscal year 2021-2022, state-owned banks and specialized banks will determine their self-assessed target, whereas, private commercial banks and foreign banks will set their target of 2.10% of total credit portfolio.
17/08/2021	**SMESPD Circular No: 08**	Cash Incentive Facility for the **Women Entrepreneur** under CMSME Sector	If the disbursed credit facility to woman entrepreneur has been recovered on due time, both the bank and client will get 1% of the capital as cash incentive (Continued till 31/12/2024).

[1] Under others, packages like Cash Transfer to 5 million vulnerable families by Govt., Interest suspension on loan and investment were included .

01/09/2021	**FE Circular No: 22**	Disposal of **Foreign Loan/Supplier's Credit Proposals** of Private Sector Enterprises	Importers having registered with BIDA or with the Department of Textiles may submit applications to BIDA for extension of usance /refinancing period to be allowed by suppliers/lenders against permissible deferred imports beyond one year.

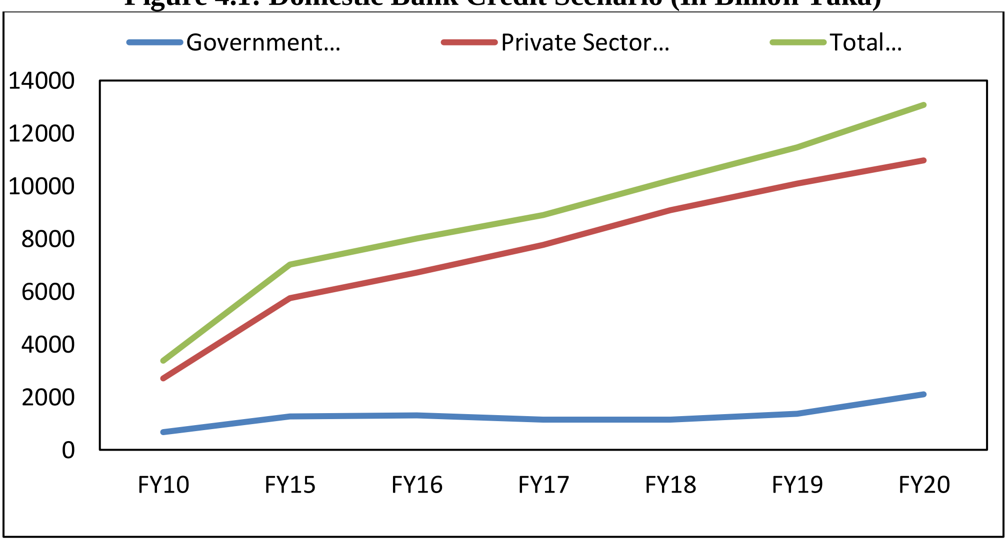
4. Review of Credit Portfolio of Banks

Credit portfolio of banks with respect to size, composition, quality and growth was reviewed in this section with a view to examining performance, sustainability, and resilience to absorb shocks of banks. A well-diversified portfolio is a prerequisite for safety and soundness of the banking sector as well as economy.

4.1. Domestic Bank Credit Scenario: Government and Private Sector Credit

Overall domestic credit consisting Government and Private Sector credit increased steadily from FY 10 to FY20 (Figure-4.1). This growth is driven by increasing growth of Government Sector credit in FY20. Private Sector credit slowed down during 2020 reflecting impact of COVID-19 pandemic on the banking sector as a whole. Government sector credit may increase further due to sharp decline of government revenue from tax, less sale of savings certificates and budget deficit of the current fiscal year.

Figure 4.1: Domestic Bank Credit Scenario (In Billion Taka)



Source: Bangladesh Bank, Annual Report

4.2. Loans and Advances by Major Economic Purposes: Composition and Growth

In 2020, around 33.99 percent of all banks' outstanding loan was in trade sector. (Table-4.1) which was 1.15 percent higher compared to 2019. In this sector, SOCBs increased flow of funds significantly in 2020. All bank's outstanding industrial term loan decreased slightly to 20.22 percent in 2020 from 20.24 percent in 2019. Despite many regulatory and supervisory supports, the proportion of outstanding loan amount to agriculture, fishing and forestry sector slightly decreased to 4.54 percent in 2020. Similarly, the share of outstanding credit to industrial working capital and construction decreased in 2020 from 2019.

Table 4.1: Contribution of Each Group of Banks to Different Economic Purposes (%)

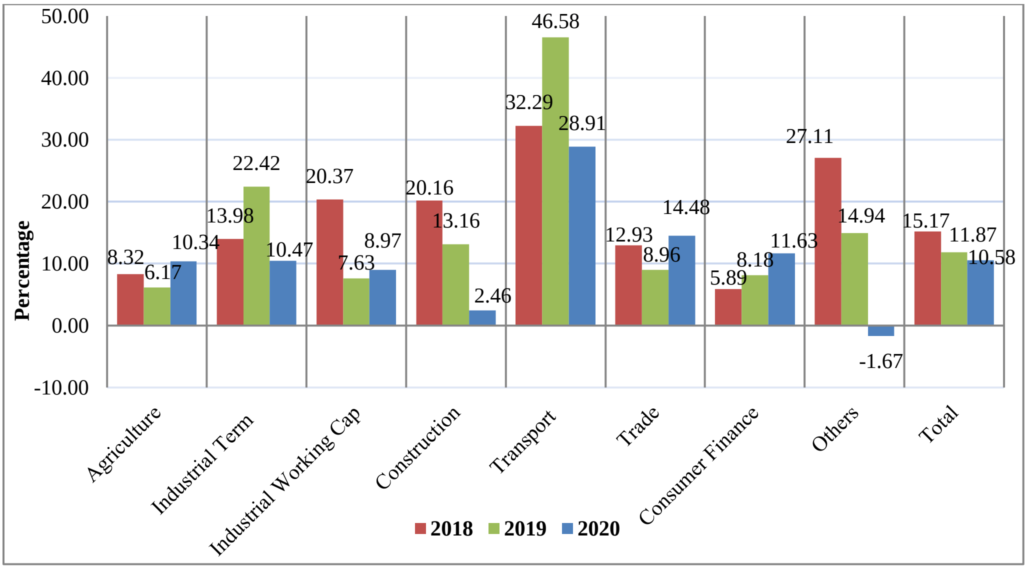
Economic Purposes	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
1.Agriculture, Fishing & Forestry	4.93	1.75	75.04	4.40	4.55	4.88	1.79	73.74	4.30	4.54
2. Industrial Term	22.69	20.68	1.76	12.63	20.24	16.28	22.05	5.32	13.39	20.22
3. Industrial WC	18.20	22.84	1.65	32.80	21.70	17.73	22.53	2.00	33.51	21.38
4. Construction	11.25	9.79	0.79	1.41	9.52	9.10	9.36	1.36	1.11	8.82
5. Transport and Communications	2.52	0.87	0.00	0.88	1.15	3.68	0.82	0.02	1.01	1.34
6. Trade2	26.67	35.60	12.07	22.60	32.84	33.46	35.47	10.50	23.48	33.99
7. Consumer Finance	9.99	5.44	6.59	18.12	6.74	12.22	5.09	5.24	17.31	6.81
7. Others3	3.75	3.03	2.10	7.16	3.27	2.65	2.89	1.82	5.89	2.91
Total	100	100	100	100	100	100	100	100	100	100

Source: Authors' Calculation

As shown in Figure-4.2, total bank credit increased by 10.58 percent in 2020, which was slightly lower than the credit growth rate in 2019. The highest rate of growth was visible in transport category which was followed by trade loan and consumer finance category, respectively. Continuous decline in credit growth rate may be a cause of concern for bankers and policy makers.

[2] Trade includes the service sector too.
[3] Others include consumer finance, water, works and sanitary services, storage, and miscellaneous.

Figure 4.2: Growth of Advances by Major Economic Purposes: 2018-2020



***Source:** Authors' Calculaion*

4.3. Industrial Term Loan: Composition and Growth

Term loans are crucial for creating capital goods or fixed assets through implementing new projects or extension of existing projects. In 2020, SBs had 89.60 percent of their total industrial credit outstanding in the large industries (Table-4.2). Resembling SBs, other bank groups had their lion's share in large industries. Only 16.97 percent of total industrial term loan was outstanding in SMEs in 2020 which was slightly over 2 percent higher compared to previous year. In financing cottage industries, contributions of all bank groups were very tiny in 2020. Term loan outstanding in service industries was 16.06 percent in 2020, slightly higher compared to the same of the previous year.

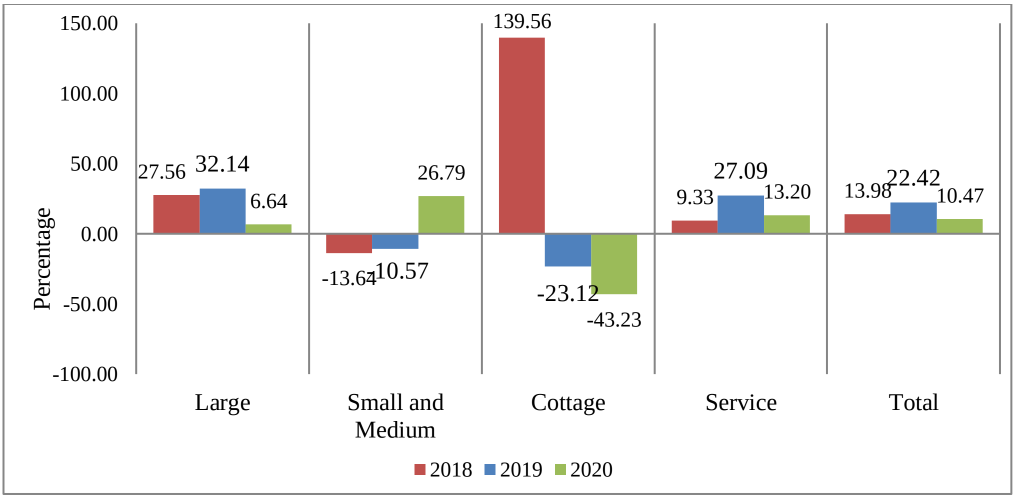
Table 4.2: Industrial Term Loan by Size and Sector: Share of Each Group of Banks (%)

Size and Nature of Industrial Credit	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
1. Large	68.04	69.65	44.38	66.19	69.18	57.92	68.01	89.60	73.79	66.78
2. SME	20.08	13.57	30.92	5.06	14.79	29.21	15.20	1.24	4.35	16.97
3. Cottage	1.34	0.07	5.68	0.21	0.35	0.13	0.19	0.05	0.13	0.18
4. Service	10.54	16.71	19.02	28.55	15.68	12.74	16.59	9.11	21.73	16.06
Total	100	100	100	100	100	100	100	100	100	100

***Source:** Authors' Calculation*

In examining growth picture, the overall growth rate of industrial term loan in 2020 was 10.47 (Figure 4.3) which was almost half of the growth rate of previous year. Huge decline in the growth rate of industrial term loan may be due to the COVID-19 pandemic. The growth rate for SMEs was highly inspiring whereas that of cottage industries was quite unimpressive in 2020.

Figure 4.3: Growth of Industrial Term Loan by Size and Sector: 2018-2020



Source: Authors' Calculation

4.4. Advances by Division: Composition and Growth

About 86.74 percent of bank advances was concentrated in Dhaka and Chattogram division in 2020, i.e only about 13.26 percent of advances went to other divisions (Table 4.3). FCBs advanced up to 99.46 percent of its total loan in Dhaka and Chattogram divisions. Barisal and Sylhet division got least priority in both years. To reduce regional economic distribution, such inequitable distribution is required to bring down at a rational level. This may increase concentration risk which would compel banks to keep additional capital under Basel-III.

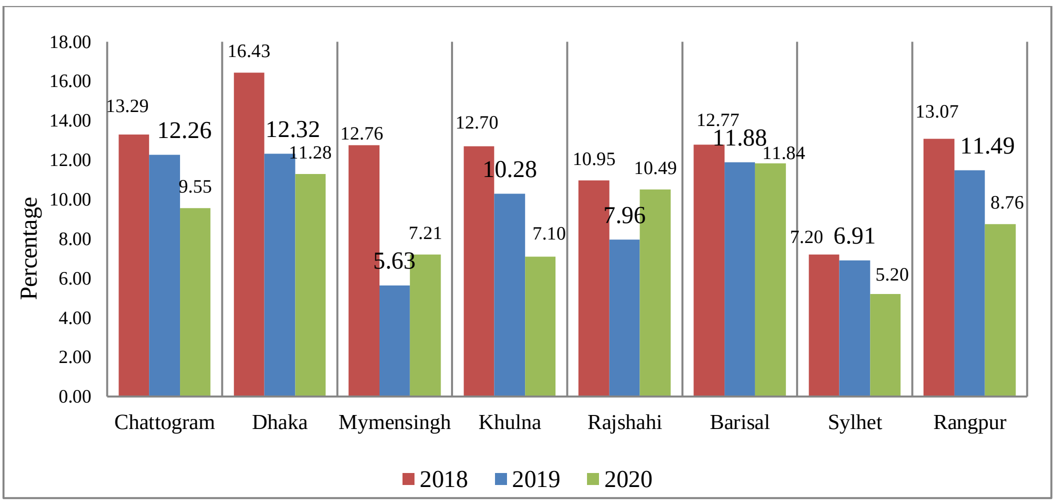
Table 4.3 Advances by Geographical Distribution: Share of Each Group of Banks to Different Divisions (%)

Divisions	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
Chattogram	11.03	21.26	14.36	10.02	18.79	9.41	21.47	14.01	9.28	18.62
Dhaka	64.14	69.11	28.46	89.37	67.69	66.53	69.12	28.72	90.18	68.12
Mymensing	2.50	0.77	11.08	0.00	1.36	2.35	0.75	10.80	0.00	1.32
Khulna	8.73	2.60	12.75	0.11	3.94	8.35	2.47	13.77	0.11	3.82
Rajshahi	5.24	3.22	9.66	0.08	3.68	5.17	3.22	9.71	0.08	3.67
Barisal	2.24	0.58	7.80	0.00	1.08	2.19	0.60	7.82	0.00	1.09
Sylhet	1.25	1.02	4.69	0.41	1.15	1.21	0.96	4.64	0.35	1.09
Rangpur	4.86	1.44	11.20	0.00	2.30	4.80	1.41	10.52	0.00	2.27
Total	100	100	100	100	100	100	100	100	100	100

Source: *Authors' Calculation*

Unlike previous year, highest growth was observed in Barisal division. However, this growth over a tiny base does not signify any major change in credit disbursement in that division. As depicted in Figure-4.4, Dhaka division experienced the second highest growth in 2020. Credit growth of Chattogram division was almost 2 percent lower than the credit growth of Dhaka division in 2020. Growth of advances in Sylhet division marked the lowest in 2020 .

Figure 4.4: Growth of Advances by Geographical Distribution: 2018-2020



Source: *Authors' Calculation*

4.5. Advances by Size of Loan Account: Composition and Growth

About 38.87 percent of bank credit was outstanding in the largest loan category of above Tk. 200 million in 2020 (Table-4.4). In this case, the contribution of the SOCBs was highest (54.74 percent) followed by PCBs, FCBs and SBs. However, slightly over 75 percent of SBs' credit belonged to loan size category of up to Tk.1 million indicating most of the loans of SBs were outstanding among small borrowers.

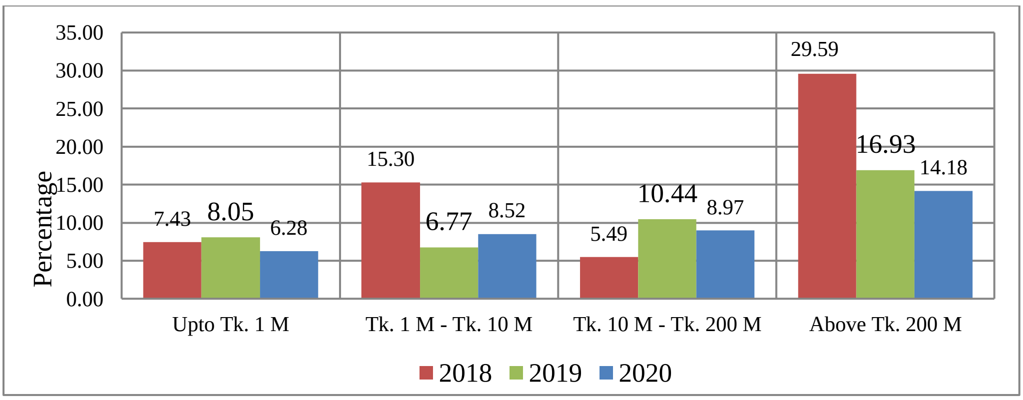
Table 4.4: Share of Each Group of Banks to Different Size of Loan Accounts (%)

Size of Loan Accounts	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
Upto Tk. 1 Million(M)	14.11	6.56	75.54	9.30	10.05	13.48	6.21	75.33	8.76	9.66
Tk.1M – Tk.10M	16.54	17.27	11.27	19.25	17.03	15.11	17.24	11.62	18.29	16.71
Tk.10M – Tk.200M	17.75	40.43	5.65	41.83	35.27	16.67	40.03	5.29	43.18	34.76
Above Tk.200M	51.60	35.74	7.54	29.62	37.65	54.74	36.53	7.76	29.76	38.87
Total	100	100	100	100	100	100	100	100	100	100

Source: *Authors' Calculation*

In terms of growth rate, loan category of above Tk.200 million experienced highest growth in 2020 (Figure-4.5). Least growth was observed in the loan category Up to Tk.1 Million.

Figure 4.5: Growth of Advances by Size of Loan Account: 2018-2020



Source: *Authors' Calculation*

4.6. Advances by Urban and Rural: Composition and Growth

About 89.65 percent of the total advances of all banks (Table-4.5) were outstanding in the urban areas in 2020 compared to 89.89 percent in 2019. In providing rural advances, SBs played a major role extending in rural areas. Such financing pattern may create urban-rural disparity, as mentioned earlier. However, absence of required infrastructure, utilities and entrepreneurial initiatives are also the reasons for fewer shares of advances in rural areas.

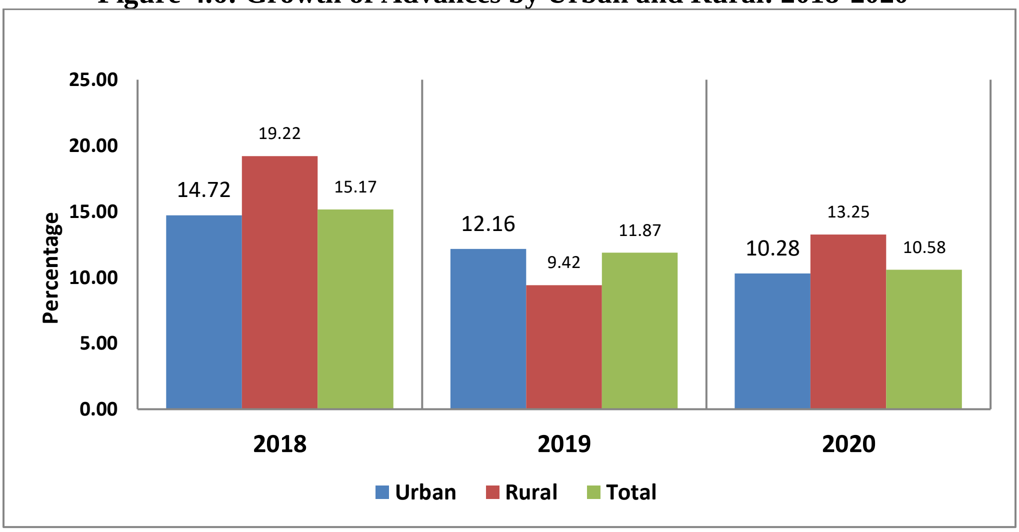
Table 4.5: Advances by Urban and Rural: Share of Each Group of Banks to Different Areas (%)

Urban/ Rural Area	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
Urban	79.09	94.29	32.90	100.00	89.89	77.93	94.31	32.89	100.00	89.65
Rural	20.91	5.71	67.10	0.00	10.11	22.07	5.69	67.11	0.00	10.35
Total	100	100	100	100	100	100	100	100	100	100

Source: *Authors' Calculation*

In 2020 (Figure-4.6), rural credit growth rate was higher than that of the previous year. This growth phenomena are required to be continued in future for the bridging the gap between urban and rural advances. Particularly, rural agricultural output through extending sufficient financing is crucial for the food security at this time of COVID-19 pandemic.

Figure-4.6: Growth of Advances by Urban and Rural: 2018-2020



Source: Authors' Calculation

4.7. Advances by Interest Rate: Composition and Growth

About 79 percent of total advances of all banks in 2020 was outstanding between 0.1 percent to 10 percent interest rate (Table-4.6). All bank groups were found to have lion share of their loans outstanding in this interest rate loan bracket in 2020. This reduction of loan interest rate will reduce the cost of business and enhance competitiveness of the businesses of the country.

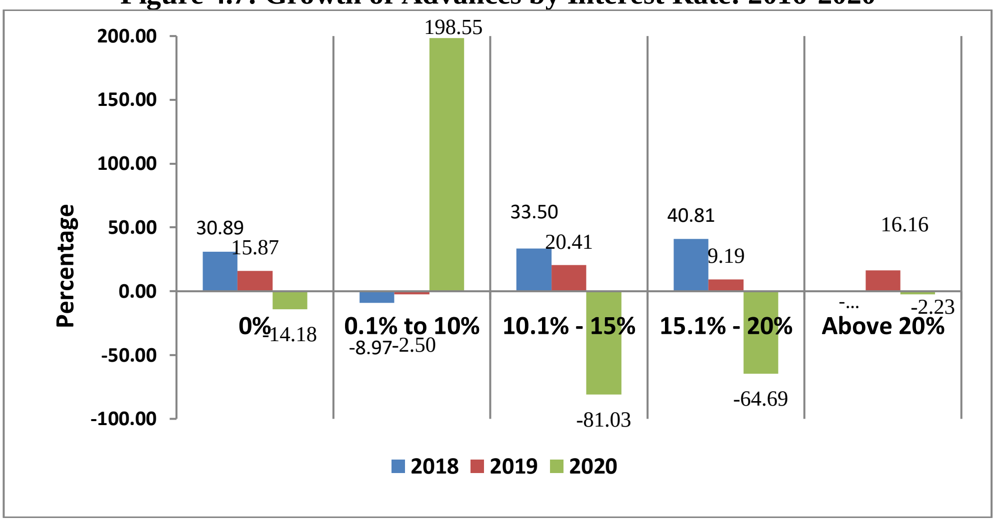
Table 4.6: Share of Each Group of Banks to Different Interest Rate Ranges (%)

Interest Rate Range	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
0%	26.18	11.42	12.09	5.79	13.99	21.97	8.30	10.70	6.21	10.85
0.1% to 10%	61.77	17.83	85.45	56.47	29.21	75.29	78.82	88.48	91.74	78.85
10.1% - 15%	12.05	67.85	2.46	32.95	54.47	2.74	11.70	0.82	0.10	9.34
15.1% - 20%	0.00	2.51	0.00	2.74	1.98	0.00	0.84	0.00	0.06	0.63
Above 20%	0.00	0.39	0.00	2.04	0.36	0.00	0.34	0.00	1.89	0.32
Total	100	100	100	100	100	100	100	100	100	100

Source: Authors' Calculation

The phenomenal growth rate of loan was observed in 2020 at interest rate range 0.1 percent to 10 percent (Figure-4.7). In contrast, negative growth rate was found in all other interest rate categories.

Figure 4.7: Growth of Advances by Interest Rate: 2016-2020



Source: Authors' Calculation

4.8. Advances by Security: Composition and Growth

A total of 67.12 percent of the advances of all banks in 2020 were secured by real estate followed by guarantee, merchandise, financial obligations, machinery and fixed assets (Table-4.7). Notably, real estate is considered as the sensitive security which may suffer from price volatility leaving loans partly unsecured and may lead to strategic default. Shares and securities were the least preferred form of security acceptable to banks in both years. The proportion of unsecured advances of all banks in 2020 was 0.61 percent slightly slower than 2019.

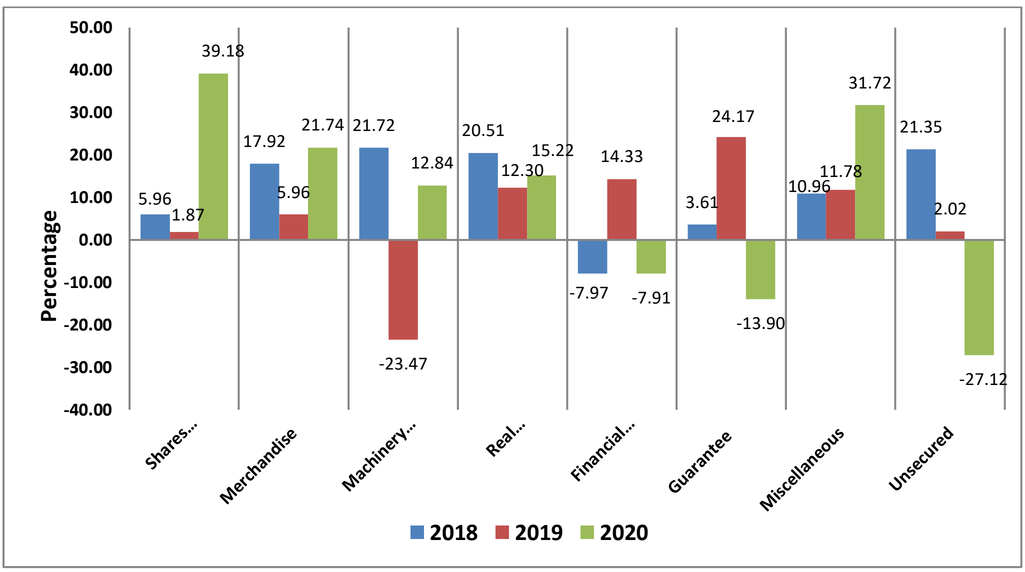
Table 4.7: Advances by Security: Share of Each Group of Bank against Securities (%)

Divisions	2019 (September)					2020 (September)				
	SOCBs	PCBs	SBs	FCBs	All Banks	SOCBs	PCBs	SBs	FCBs	All Banks
Shares and Securities	0.00	0.51	0.00	0.23	0.39	0.00	0.60	0.00	1.41	0.50
Merchandise	7.04	5.32	0.52	2.09	5.39	7.26	6.01	0.55	1.37	5.94
Machinery and Fixed Assets	4.15	2.10	4.42	11.57	2.86	4.64	2.43	4.28	3.33	2.92
Real Estate	64.29	67.43	26.23	30.39	64.42	65.35	70.36	33.76	30.93	67.12
Financial Obligations	2.66	7.39	2.91	11.36	6.52	2.21	6.17	0.98	10.93	5.43
Guarantee	17.85	13.01	6.50	17.72	13.88	17.47	9.08	2.30	20.27	10.80
Miscellaneous	2.61	3.82	57.87	17.33	5.61	2.95	5.06	53.48	24.26	6.68
Unsecured	1.40	0.41	1.55	9.30	0.92	0.11	0.29	4.66	7.50	0.61
Total	100	100	100	100	100	100	100	100	100	100

Source: *Authors' Calculation*

As regards growth of advances against different forms of security (Figure-4.8), the highest growth was observed in 2020 in real estate category followed by machinery and fixed asset in 2020.

Figure 4.8: Growth of Advances by Security: 2018-2020



Source: *Authors' Calculation*

4.9. Gross Non-Performing Loan (GNPL) and Net Non-Performing Loan (NNPL) by Bank Groups

Gross NPL of the banks slightly decreased to 9.2 percent in June 2020[4] from 9.3 percent in December 2019 (Table-4.8). Highest percentage of decrease in gross NPL was observed in case of SOCBs in 2020 which was 1.2. PCBs experienced slight increase in gross NPL. However, gross NPL of SBs increased the most in first half of the year 2020. Net NPL increased to 0.2 percent at June 2020 from 1 percent in December 2019.

Table 4.8: Gross NPL and Net NPL by Bank Groups

Bank Groups	Gross NPL (%)			Net NPL (%)		
	December 2019	June 2020	Change	December 2019	June 2020	Change
SOCBs	23.9	22.7	-1.2	6.1	3.2	-2.9
SBs	15.1	15.9	0.8	3.0	2.7	-0.3
PCBs	5.8	5.9	0.1	-0.1	-0.5	-0.4
FCBs	5.7	5.5	-0.2	0.2	-0.4	-0.6
All Banks	9.3	9.2	-0.1	1.0	0.2	-0.8

Source: *Bangladesh Bank, Annual Report, 2019-2020*

4.10. Gross NPL and Provision Scenario

Gross NPL of the banks increased by an amount of Tk.17.9 billion during the period of six month between December 2019 and June 2020 (Table 4.9). During the same period, provision requirement against NPL increased by Tk. 40.54 billion. However, banks decreased the amount of their provision against NPL by an amount of Tk. 37.6 billion. Provision maintenance ratio slightly improved during the period to 93.01 percent from 89.2 percent. Banks may accelerate recovery drive or increase collateral security to become compliant in case of maintaining required provision against the NPL.

Table 4.9: Gross NPL and Provision Scenario

Particulars	NPL and Provision Scenario		
	December 2019	June 2020	Change
Gross NPL (In Billion Tk.)	943.3	961.2	17.9
Required Provision (In Billion Tk.)	613.2	654	40.8
Provision maintained (In Billion Tk.)	646.6	609	-37.6
Deficit (-) (In Billion Tk.)	-66.6	-45	21.6
Provision Maintenance Ratio (%)	89.2	93.1	3.9

Source: *Bangladesh Bank, Annual Report, 2019-2020*

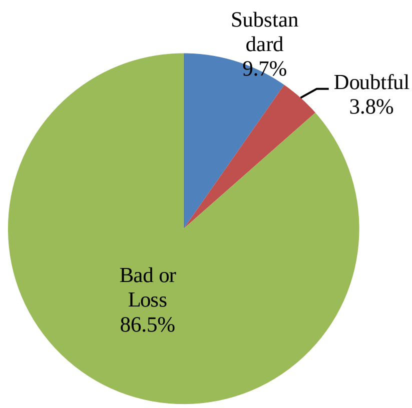
[4] NPL came down at 9.32 per cent in December 2019.

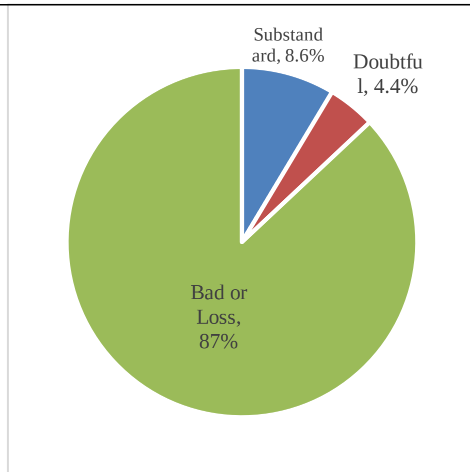
4.11 Composition of NPL of Banks

Composition of NPL changed unfavorably between September 30, 2019 and June 30, 2020. During this period, bad and loss category loan constituted the largest part of the pie (Figure-4.9). In June 2020, bad and loss category loan was about 87 percent of total NPL which was slightly higher than the position at September 30, 2019. This condition indicates that most of the NPLs were in the worst category.

Figure 4.10: Composition of NPL of Banks

Composition of NPL as on September 30, 2019	Composition of NPL as on June 30, 2020





Source: *Bangladesh Bank, Financial Stability Assessment Report, July-September 2019 and June 2020*

5. Review of Compliance Level with CRM Guidelines

BB advised banks to run their credit operation in the line with the Credit Risk Management (CRM) Guideline introduced in 2016. This section examines as to what extent banks followed the guidelines of CRM manual in their credit operations activities.

5.1 Credit Operation in Banks: Measurement Indicators of Credit Risk

5.1.1 Assessing Level of Credit Risk

As per CRM guideline, banks need to use a number of indicators for assessing credit risk. According to Table 5.1, all the sampled banks used Gross NPL Ratio and Net NPL Ratio for assessing credit risk. However, except some PCBs, all groups of banks considered 'Credit Concentration Ratio' cent percent and 29.46 percent positive change observed in year 2020 over 2019. The other indicated parameters like Credit Risk Weighted Assets as a % Total Assets, 'Excess CDR/ADR/IDR' and frequency of rescheduling and/or restructure were also followed increasingly by banks in 2020 over 2019 (Table 5.1). Notably, 57.14 percent of banks mostly PCBs and FCBs used some **additional indicators** to assess the credit risk which was only 4.35 per cent in 2019.

Table 5.1: Indicators that Banks Use for Assessing Credit Risk

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Gross NPL Ratio	100.00	100.00	100.00	100.00	100.00	93.33	7.14
2	Net NPL Ratio	100.00	100.00	100.00	100.00	100.00	89.66	11.54
3	Credit Concentration Ratio (HHI/ Gini Coefficient/ others)	100.00	100.00	86.36	100.00	89.29	68.97	29.46
4	Credit Risk Weighted Assets as a % Total Assets	100.00	100.00	100.00	100.00	100.00	96.55	3.57
5	Excess CDR/ADR/IDR*	100.00	100.00	100.00	100.00	100.00	75.86	31.82
6	Frequency of Loan Documentation Exceptions	0.00	100.00	95.00	100.00	92.00	75.86	21.27
7	Frequency of Rescheduling and/or Restructure	100.00	100.00	100.00	100.00	100.00	86.21	16.00
8	Other Additional Indicators	0.00	0.00	70.00	50.00	57.14	4.35	1214.29
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*
Note **CDR = Credit Deposit Ratio, ADR= Advance Deposit Ratio and IDR = Investment Deposit Ratio.*

5.1.2. Credit Concentration Risk

In 2020, all the sampled banks paid their full attention on the concentration risk covering areas like sector, division , single borrower and top borrower exposure (Table 5.2) . **Only a few SOCBs were not attentive towards the group wise exposure which resulted in negative change in 2020 over 2019.** It is also found that 60 percent of the sampled banks paid their attention to some other areas of risk concentration.

Table 5.2: Attention by Banks to the Credit Concentration Risk Areas

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Sector wise exposure	100.00	100.00	100.00	100.00	100.00	100.00	0.00
2	Division wise exposure (Geographic Concentration)	100.00	100.00	100.00	100.00	100.00	93.33	7.14
3	Group wise exposure (Outstanding amount more than)	66.67	100.00	100.00	100.00	96.67	96.77	-0.11
4	Single borrower wise exposure (Outstanding amount more than)	100.00	100.00	100.00	100.00	100.00	100.00	0.00
5	Top borrower wise exposure (Top 10-50 borrowers will be counted)	100.00	100.00	100.00	100.00	100.00	100.00	0.00
6	Others	0.00	0.00	85.71	0.00	60.00	8.00	650.00
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

5.2. Credit Operation in Banks: Managing Credit Risk in Origination Process

5.2.1 Risk Appetite Statement, Model and Incentive System

Banks must have risk appetite statement, credit scoring model, separate relationship, approval and credit administration function and incentive scheme for recovering NPL, as per CRM guidelines. All banks had credit risk appetite statement and separate relationship, approval and credit administration function as per the guideline (Table 5.3). The use of credit scoring model for small enterprise financing displayed the positive change by 28.89 percent in 2020 over 2019. **A noteworthy change was noticed in case of incentive schemes as well as punishment system relating to recovery loan.**

Table 5.3: Availability of Risk Appetite Statement, Model and Incentive Scheme

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Credit risk appetite statement	100.00	100.00	100.00	100.00	100.00	100.00	0.00
2	Credit scoring model for small enterprise financing	100.00	100.00	85.71	100.00	88.89	68.97	28.89
3	Segregation of Relationship Management Function, Approval Function, and Credit Administration Function	100.00	100.00	100.00	100.00	100.00	100.00	0.00
4	Incentive scheme for recovery of NPL	66.67	100.00	76.47	100.00	79.17	48.28	63.99
5	Punishment system for delay in recovery of loan	50.00	100.00	64.29	100.00	68.42	29.63	130.92
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

5.2.2 Internal Credit Risk Rating System (ICRRS[5]) for Assessing Credit Risk.

5.2.2.1 ICRRS and Its Application

Almost all respondent banks started to use as per the BB's circular**. However, banks were yet to fully reshape organization's structure for quantitative and qualitative analysis in implementing ICRRS. Further, 42.31 percent of the banks claimed that major gap** exist between internal rating as per ICRRS and external rating given by ECAI.

Table 5.4: ICRRS and Its Application

#	Description	Response	Remarks
1.	Starting date of using ICRRS instead of CRGS	96.67%	01.07.2019 to 01.01.2021
2.	Reshaping organization's structure (for quantitative and qualitative analysis) for implementing ICRRS	36.00%	As per BB Circular
3.	Existence of major gap between internal rating under ICRRS and external rating from ECAI.	42.31	

Source : *Researchers' calculation based on primary data.*

5.2.2.2 Effectiveness of ICRRS

Around 66 percent of banks reported that ICRRS was useful in selecting right borrower whereas 20 percent mentioned that the system was highly effective. Regarding the credit risk rating score in ICRRS , 69 percent of the banks opined that ratings were truly representing the borrower's position.

[5] Bangladesh Bank introduced 'Guidelines on Internal Credit Risk Rating System for Banks' to analyze a borrower's repayment ability based on information about a customer's financial condition including its liquidity, cash flow, profitability, debt profile, market indicators, industry and operational background, management capabilities, and other indicators. This guide line has been effective from 1st July 2019 and onward commercial banks have to strictly follow this rating system without making any change, extension, modification or deletion.

Table 5.5. Effectiveness of ICRRS

#	Particulars	Likert Scale	Response of Banks (%)				
			SOCBs	SBs	PCBs	FCBs	All Banks
1	Effectiveness of ICRRS in selecting right borrower	Highly Effective	0	0	18.18	66.67	20.69
		Effective	100	100	63.64	33.33	65.52
		Average	0	0	9.09	0	6.89
		Ineffective	0	0	9.09	0	6.9
		Highly Ineffective	0	0	0	0	0
2	Rating of ICRRS (excellent, good, marginal and unacceptable**)** in measuring the actual performance of the borrowers	Highly Effective	0	0	13.63	66.67	17.24
		Effective	100	100	68.18	33.33	68.96
		Average	0	0	9.09	0	6.9
		Ineffective	0	0	4.55	0	3.45
		Highly Ineffective	0	0	4.55	0	3.45
			n=3	**n=1**	**n=23**	**n=3**	**n=30**

Source : *Researchers' calculation based on primary data.*

5.2.2.3 Rating Review Frequency in Banks

Almost all the banks (96.43 percent) reported that quality of loan were being reviewed at least annually through ICRRS apart from running this grading score for loan decision. Only a tiny portion (3.57 percent) responded that even they were not reviewing annually.

Table 5.6. Rating Review Frequency in Banks

#	Response	Percentage of Banks				
		SOCBs	SBs	PCBs	FCBs	All Banks
1	Reviewed at least annually	100.00	100.00	95.45	100.00	96.43
2	Not Reviewed at least annually	0.00	0.00	4.55	0.00	3.57
	Total	**100**	**100**	**100**	**100**	**100**

Source : *Researchers' calculation based on primary data.*

5.2.2.4 Loan Proposals Under ICRRS

Among the respondent banks, a total number of 66180 proposals were examined under ICRRS out of which 98.54 percent of the proposals were accepted and only 1.66 percent of the proposals were rejected. In terms of the loan repayment status approved by applying the ICRRS, 90.80 percent of the loans are regular in payment whereas 9.20 percent of the loans are irregular.

Table 5.7. Loan Proposals under ICRRS

Sl. No.	Particulars	Total No. of Loan Proposals Under ICRRS	%	Total
1	Loan proposals accepted under ICRRS in 2020	65216	98.54	66180
2	Loan proposals rejected under ICRRS in 2020	964	1.66	
3	Loan proposal approved as per ICRRS with regular in repayment	59214	90.80	65216
4	Loan proposal approved as per ICRRS with irregular in repayment	6002	9.20	

Source : *Researchers' calculation based on primary data.*

5.2.2.4 Facing Problems/Challenges by Banks in Applying ICRR System (Mixed Response)

In response to the question 'whether the banks face any problem for applying ICRRS', respondents' raised different issues that are depicted in Table 5.6.5.

Table 5.8.: Facing Problems/Challenges by Banks in Applying ICRR System (Mixed Response)

l. No.	Particulars	Frequency	% of Banks
1	Lack or unavailability of audited financials.	23	76.66
2	No separate scores for non-funded facilities in ICRRS.	18	60.00
3	Only widely practiced businesses and industries covered in ICRRS (No specific category for contractors, NGOS & MFIs)	14	46.67
4	Absence of inbuilt process for cash flow calculation .	11	36.67
5	Deals with historical data only, projected data are ignored	8	26.67
6	Assignment of bill receivables of contractors not counted as security in ICRRS	4	13.33
7	Mandatory Marginal scoring against projected financials	3	10.00
8	Goodwill not considered.	2	6.66
	Total	**n=30**	

Source : *Researchers' calculation based on primary data.*

5.3 Credit Operations in Banks: Managing Credit Risk Mitigation Strategies

5.3.1.Mitigation Strategies: Considerations for Collateral Security

In order to mitigate the credit risk, all the respondent banks contemplated the stability of value, marketability or liquidity, and control over the collateral security when accept the collateral. (Table-5.9). However, only a few did not consider the eligibility of collateral security coverage as per CRM guideline.

Table 5.9: Considerations for Collateral Security

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Stability of value	100.00	100.00	100.00	100.00	100.00	93.55	6.90
2	Marketability or Liquidity	100.00	100.00	100.00	100.00	100.00	96.77	3.33
3	Control Over the Security	100.00	100.00	100.00	100.00	100.00	96.77	3.33
4	Eligible collateral security coverage as per CRM guideline	100.00	100.00	95.65	100.00	96.67	100.00	-3.33
5	Others	100.00	0.00	62.50	100.00	63.64	7.69	727.27
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

5.3.2. Mitigation Strategies: Factors Considered in Taking Third-Party Guarantees

While accepting the third party guarantee, all respondent banks considered the legal capacity of the guarantor, corporate guarantee allowed by a MoA and AoA and CIB of guarantor.. A few of the PCBs did not consider ICRR of the guarantor, corporate guarantee approved in the board meeting and equity statement of guarantor in taking third party guarantee.

Table 5.10: Factors Considered in Taking Third-party Guarantees

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Legal capacity of the guarantor	100.00	100.00	100.00	100.00	100.00	100.00	0.00
2	Rating of guarantor company by ECAI	100.00	100.00	80.00	100.00	84.62	67.86	24.70
3	ICRR of guarantor	100.00	100.00	70.00	100.00	76.92	71.43	7.69
4	Corporate guarantee, supported by a MoA and AoA	100.00	100.00	100.00	100.00	100.00	96.77	3.33
5	Corporate guarantee, approved in the board meeting of the corporate guarantor	100.00	100.00	91.30	100.00	93.33	96.77	-3.56
6	CIB of guarantor	100.00	100.00	100.00	100.00	100.00	96.55	3.57
7	Equity statement of guarantor	100.00	0.00	90.48	100.00	88.89	96.67	-8.05
8	Others	0.00	0.00	37.50	0.00	33.33	8.00	316.67
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source : *Researchers' calculation based on primary data.*

5.4 Credit Operations in Banks: Managing Credit Risk in the Administration Process

5.4.1. Administration Process: Steps for Credit Risk Administration

As part of the credit administration process, commercial banks usually conduct customer calls and frequent site visits and monitor the loan. In 2020, almost 90% of the banks developed their call schedule plan, 68 percent of the banks visited the site and 79 percent of them evaluate the effectiveness of loan administration by focusing on loan policy, loan approval system, and ongoing loan monitoring on monthly basis (Table 11).

Table 5.11: Steps for Credit Risk Administration

#	Particulars	Response							
		2020				2019			
		Monthly	Quarterly	Semiannually	Yearly	Monthly	Quarterly	Semiannually	Yearly
1	Develop a call schedule plan	89.29	7.14	0.00	0.00	79.31	6.90	0.00	3.45
2	Determine the frequency of site visits	67.86	21.43	7.14	0.00	77.42	6.45	12.90	3.23
3	Evaluate effectivenes s of loan administrati on by focusing on loan policy, loan approval system, and ongoing loan monitoring	78.57	7.14	14.29	0.00	80.65	0.00	0.00	16.13
4	Others	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	n=30				n=32			

***Source :** Researchers' calculation based on primary data.*

5.5. Credit Operation in Banks: Managing Credit Risk with Appropriate MIS

5.5.1. Maintaining an Accurate and Updated Database of all Credit Applications

Banks are expecting to maintain an accurate and updated database for managing credit risk . In 2020, all groups of banks maintained accurate and updated database regarding all approved applications and collateral. But the same level of attention was not observed in case of declined application and taken security (Table 5.12). It is noticeable that SOCBs were 100 percent compliant in maintaining database.

Table 5.12: Maintaining an Accurate and Updated Database of all Credit Applications

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Approved applications	100.00	100.00	100.00	100.00	100.00	100.00	0.00
2	Declined applications	100.00	100.00	100.00	100.00	100.00	90.00	11.11
3	Collateral	100.00	100.00	95.65	100.00	96.67	100.00	-3.33
4	Security	100.00	50.00	95.65	100.00	96.43	93.33	3.32
5	Others	0.00	0.00	42.86	100.00	44.44	4.00	1011.11
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

5.5.2 Maintaining MIS: 'Booking MIS' and 'Segmentation MIS'

All groups of banks except a few PCBS were maintaining both '**Booking MIS' and 'Segmentation** MIS' completely as per CRM guidelines. Maintaining of such MIS facilitated banks to generate any reports relating to borrowers as and when required.

Table 5.13: Maintaining an Accurate and Updated Database of all Credit Applications

#	Particulars					
		2020				
		SOCBs	SBs	PCBs	FCBs	All Banks
1	Maintaining 'Booking MIS'	100.00	100.00	89.47	100.00	92.00
2	Maintaining 'Segmentation MIS'	100.00	100.00	89.47	100.00	92.00
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**

Source: *Researchers' calculation based on primary data.*

5.6. Credit Operation in Banks: Managing Credit Risk of Problem Assets

5.6.1. Considering the 'Warning Signs' in Predicting Problem Loans

In envisaging problem loan, all respondent banks ranked 'documentation weakness' as a hefty warning sign, followed by 'collateral deterioration', 'high use of lines of credit' and 'delay in receipt of financial statements' in 2020. Banks altogether performed relatively better in using warning signs for predicting problem assets in 2020 as compared to 2019 (Table 5.14).

Table 5.14: 'Warning Signs' in Predicting Problem Loans

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Documentation weakness	100.00	100.00	100.00	100.00	100.00	96.77	3.33
2	Collateral deterioration	100.00	100.00	95.45	100.00	96.43	100.00	-3.57
3	High use of lines of credit	100.00	100.00	95.24	100.00	96.15	89.66	7.25
4	Delay in receipt of financial statements	100.00	100.00	90.48	100.00	92.59	93.10	-0.55
5	Change in senior management	100.00	100.00	90.48	100.00	92.31	64.29	43.59
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

5.6.2 Banks' Interaction with Borrower in Managing Credit Risk of Problem Assets

In 2020, all groups of banks were found very attentive to use all options suggested by CRM in managing problem assets through **Interaction with Borrowers** (Table 5.15). Contrasting to 2019, banks showed more attention in 2020 in this respect.

Table 5.15: Banks' Interaction with Borrower in Managing Credit Risk of Problem Assets

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Developing a preliminary plan before meeting with the borrower.	100.00	100.00	100.00	100.00	100.00	100.00	0.00
2	Arranging a meeting with the borrower soon after learning about the problem loan.	100.00	100.00	100.00	100.00	100.00	100.00	0.00
3	Exploring available alternatives to solve the problem.	100.00	100.00	100.00	100.00	100.00	96.67	3.45
4	Inviting borrowers to outline interim steps to resolve the problem.	100.00	100.00	100.00	100.00	100.00	100.00	0.00
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

5.6.3. Issues Need to Addressed by Banks in Conducting Credit Recovery Functions

The Table 5.16 revealed that all banks were consistent in determining their respective account action plan/recovery strategy, ensuring adequate and timely loan loss provisions and reviewing the non-performing or worse accounts on regular basis though the PCBs were a bit lag behind. The overall status in this regard was slightly behind of 2019.

Table 5.16: Issues Need to Addressed by Banks in Conducting Credit Recovery Functions

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Determine account action plan/recovery strategy	100.00	100.00	95.65	100.00	96.67	100.00	-3.33
2	Ensure adequate and timely loan loss provisions	100.00	100.00	95.65	100.00	96.67	100.00	-3.33
3	Regular review of non-performing or worse accounts	100.00	100.00	95.65	100.00	96.67	100.00	-3.33
4	Others	0.00	0.00	50.00	100.00	50.00	4.00	1150.00
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

6. Credit Operation with Funds Announced Under Stimulus Package

Government and Bangladesh Bank announced stimulus package for large industries and service sectors hit hard by the onslaught of the corona virus. This section examines relevant issues relating to credit operation of banks with funds announced under stimulus package.

6.1 Amount Stimulus Package: Allotted and Disbursed

Total allotment from BB to the respondent banks under stimulus package were BDT 76,910.69 crore in 2020 whereas the banks were successful in disbursing BDT 71,457.43 crore which is 92.91 percent of the allotted amount. Among the three major sectors, 75.86 percent funds under stimulus package were disbursed in the manufacturing industry.

Table 6.1 Amount of Stimulus package

<table>
<tr><th>#</th><th colspan="2">Issue</th><th>Response (% of Banks)</th><th>Total amount (BDT in Crore)</th><th>Max</th><th>Min</th><th>Average</th></tr>
<tr><td>1</td><td colspan="2">Amount (BDT in Crore) of funds banks were allotted under Stimulus Package</td><td>90.00</td><td>76,910.69</td><td>18,890.00</td><td>91.77</td><td>2,848.54</td></tr>
<tr><td>2</td><td colspan="2">Amount of loan (BDT in Crore) banks disbursed under stimulus Packages</td><td>90.00</td><td>71,457.43</td><td>15,800.00</td><td>29.00</td><td>2,646.57</td></tr>
<tr><td rowspan="3">3</td><td rowspan="3">Sectors your bank disbursed major portion of loan under Stimulus Package.</td><td>1. Manufacturing Industry</td><td>75.86</td><td colspan="4" rowspan="3">N/A</td></tr>
<tr><td>2. Service Industry</td><td>10.34</td></tr>
<tr><td>3. Trading</td><td>10.34</td></tr>
</table>

Source: *Authors' Calculation based on Primary data.*

6.2 Sectorial Disbursement of Funds under Stimulus Package[6]

Under stimulus package, highest amount of funds was disbursed in RMG (21.43%), Textile/Spinning Industry (14.29%), Agriculture and agro-based industry (10%), Food (10%), Construction (7.14%), and Health care (7.14%).

Table 6.2 Sectorial Disbursement of Funds under Stimulus Package

#	Particulars	Frequency	% of Banks
1	Readymade Garments	15	21.43
2	Textile/Spinning Industry	10	14.29
3	Agriculture/Agro based industry, Auto rice Mills/ Livestock, Fishing/Poultry Feed	7	10.00
4	Food commodity/Food & allied/Beverage/ Manufacture of food products	7	10.00
5	Construction/Metal/Plant & Machineries	5	7.14
6	Health Care/Medicine Business/Pharmaceutical	5	7.14

Source: *Source: Authors' Calculation based on Primary data.*

[6] The respondent banks disbursed funds under stimulus package among 22 sectors. In Table 6.2,only major sectors having more than 7.00 per cent disbursement were mentioned.

6.3 Respondent's Perceptions about Stimulus Package

A total of 93.10 percent respondent banks opined that actual eligible borrower got the benefits of stimulus package because the process of loan application to loan disbursements were not time consuming (62.07%) and CMSME sector was not ignored to avail the facility of stimulus package (79.31%). There is almost 50-50 possibility of raising NPL due to stimulus package (Table 6.3).

Table 6.3 Respondent's Perceptions about Stimulus Package

#	Issues	Yes/No	Response (% of Banks)
1	Time consuming process of loan application for availing of stimulus packages.	yes	37.93
		no	62.07
2	Possibility of increasing NPL from the loans given under stimulus package.	yes	48.28
		no	51.72
3	Whether actual eligible borrower gets the benefits of Stimulus Package	yes	93.1
		no	6.9
4	Overlooking CMSME sector in disbursing loan under stimulus Package.	yes	20.69
		no	79.31

Source: *Authors' Calculation based on Primary data.*

6.4 Major Challenges in Financing under Stimulus Package

In managing the stimulus package, the respondent banks faced several barriers that are summarized in table 7.5. Among these, connection with high ups, documentation, unreliable information, etc are important.

Table 6.4 Challenges in Managing Stimulus Package

#	**Particulars**
1	Borrowers' connection with influential person/s
2	Lack of proper documentation for availing Stimulus Packages.
3	Unreliable and financial and non-financial information from the borrowers.
4	Claiming and realization of the subsidy from Bangladesh Bank on time.
5	Finding out the actual eligible borrower
6	Security of the borrowers
7	Challenges in due to Assessment of credit were very challenging as the closed bossiness premises and health care matter.

Source: *Authors' Calculation based on Primary data.*

7. Review of Selective Key Areas and Problems Faced by Banks in Credit Operations in 2020

7.1 Credit Budget and Actual Disbursement in Major Economic Purposes

The expected trend is that bank will allocate progressively more funds in their annual lending budget and based on that, the actual disbursement will increase over time in different sectors. In 2020, percentage of actual disbursed figure to budgeted amount ranged between 76.48 per cent and 94.19 per cent which was 80.85 per cent to 97.40 per cent in 2019. The industry experienced a declining trend in 2020 as compared to 2019.

Table 7.1: Credit Budget Amount and Actual Disbursed Amount by Banks in Major Economic Purposes

#	Economic Purpose	2020				2019			
		Reported Banks*	Average Budgeted Amount	Average Actual Disbursed Amount	% of Actual disbursed Amount to Budgeted Amount	Reported Banks*	Average Budgeted Amount	Average Actual Disbursed Amount	% of Actual disbursed Amount to Budgeted Amount
1	Agriculture, fishing & forestry	24	522.19	399.35	76.48	20	722.16	641.34	88.81
2	Industry: term loan	24	5219.54	4837.88	92.69	20	3870.95	3362.06	86.85
3	Industry: working capital financing	24	7411.44	6475.15	87.37	20	5794.74	5644.22	97.40
4	Construction	24	2329.68	2059.48	88.40	20	1688.67	1365.25	80.85
5	Transport	24	308.51	285.14	92.43	20	197.45	188.68	95.56
6	Trade and commerce	24	6721.33	6331.10	94.19	20	5171.84	4895.59	94.66
7	Consumer finance	24	1113.46	980.63	88.07	20	1073.41	1026.87	95.66

Source: *Authors' calculation based on primary data*

****Reported Banks*** *= This question was responded by 24 banks in 2020.*

7.2. Disbursing Loan to New Sectors/Industries in 2020

In 2020, number of banks financed in new sectors/industries has decreased as compared to 2019 (Table 6.2.). Majority of the banks (86.67%) didn't disburse any credit facilities to new sectors/industries. If this trend continues in future, it might affect the growth of entrepreneurs across the country.

Table 7.2 Disbursing loan for the first time in 2020 to new Sectors/Industries

#	Response	Percentage of Banks						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Yes	33.33	0	13.04	0	13.33	34.48	-61.34
2	No	66.67	100	86.96	100	86.67	65.52	32.28
	Total	**100**	**100**	**100**	**100**	**100**	**100**	
		n=3	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Authors' calculation based on primary data*

7.3. Availing and Facing Problems of Refinance Schemes Offered by Bangladesh Bank

7.3.1. Availing of Refinance Schemes

There is a significant development of re-financing schemes offered by BB in 2020 as compared to 2019 in all sectors (Table 7.3). Among the following eleven areas, the utilization of 'Equity and Entrepreneurship Fund' was the highest which increases by 421.05 percent in 2020 as compared to 2019.

Table 7.3: Availing of Refinance Schemes

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Housing refinance	100.00	0.00	35.71	33.33	36.84	26.92	36.84
2	Refinancing for renewable energy and energy efficient products	100.00	0.00	61.11	66.67	64.00	39.29	62.91
3	ADB supported refinance scheme for brick kiln efficiency improvement	100.00	0.00	53.33	33.33	52.38	42.86	22.22
4	Refinance scheme supported by Shariah based Banks and FIs	100.00	0.00	38.46	0.00	33.33	8.00	316.67
5	Sharecroppers refinance	100.00	100.00	28.57	0.00	31.58	8.00	294.74
6	Women entrepreneur refinance	100.00	100.00	80.95	33.33	77.78	60.71	28.10
7	Small enterprise refinance	100.00	100.00	90.00	66.67	88.00	46.43	89.54
8	SME refinance	100.00	100.00	85.71	66.67	84.62	53.57	57.95
9	Equity and entrepreneurship fund	100.00	100.00	50.00	66.67	57.89	11.11	421.05
10	Export development fund	100.00	0.00	85.71	66.67	82.14	67.86	21.05
	Total	n=3	n=1	n=23	n=3	n=30	n=32	

Source: *Authors' calculation based on primary data*

7.3.2. Problems with Refinance Schemes

Major problems that bankers faced in 2020 with refinancing scheme were delay in getting approval from Bangladesh Bank (28.13%) and complex documentation and reporting system (25%)). Poor loan recovery rate (18.75%), insufficient fund for refinancing (12.50%), delay in reimbursement (12.50%), failure of borrower to repay the loan on due time (12.50%), and time mismatch between demand and supply of fund were also considered as limitations of this program.

Table 7.4 Problems Facing by Banks with Refinancing Schemes

#	Problems Recognized	Frequency	% of Banks
1	Longer time for approval of refinance facility from Bangladesh Bank	9	28.13
2	Complex documentation & reporting process	8	25.00
3	Low recovery rate	6	18.75
4	Delay in reimbursement	4	12.50
5	Failure of borrowers to repay the installment in due time.	4	12.50
6	Time mismatch of demand and supply of fund	4	12.50

Source: *Authors' calculation based on primary data*

7.4. Address 'Environmental Risk' in Lending Decision

Banks are supposed to address environmental risk in their lending decision very cautiously as suggested by Bangladesh Bank in its 'Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh' issued in 2017. Compared to 2019, environmental risk rated projects under all three categories (high, moderate and low) were significantly high in 2020. Particularly, financing in highly rated projects drew a keen attention as these are detrimental to the environment (Table – 7.5).

Table 7.5: Address 'Environmental Risk' in Lending Decision

#	Particulars	Responses (%)					
		2020			2019		
1	Consideration of Environmental Risk in lending decision	93.10			93.00		
2	Rate of Environmental Risk	Banks (%)	No. of Projects	Amount (BDT crore)	Banks (%)	No. of Projects	Amount (BDT crore)
	High	73.33	59	2815.23	33.33	48	1064.65
	Moderate	73.33	8852	37446.87	57	3667	14420.02
	Low	70	43781	112375.14	65	13846	63868.68
	Total	n=30			n=32		

Source: *Researchers' calculation based on primary data.*

7.5. Written off Loan and their Recovery

Year 2020 experienced a good move both in terms of written off loan to total loan and recovery rate of total written off loan. It is a matter of tiny relief that the average written-off loan as a percentage of total loan among respondent banks decreased in 2020 and the average recovery rate as percentage of total written-off loan increased in the same year, thanks to BB for policy supports to Banks (Table 7.6).

Table 7.6: Written off Loan and their Recovery

#	Particulars	2020				2019			2018		
		Response (% of Banks)	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
1	Written off loan as % of total loan	86.67	17.20	0.03	3.04	140.86	0.01	8.43	224.50	0.01	12.77
2	Recovery rate (%) of total written of loan	93.33	64.00	0.01	6.32	23.03	0.02	4.25	24.08	0.01	4.28
	Total	n=30				n=32			n=32		

Source: *Researchers' calculation based on primary data.*

7.6. Strategies Used in Collecting Money from Habitual/Willful Defaulters

Respondent banks largely used 'legal action' as strategy for collecting money from habitual/willful defaulters in 2020 followed by meeting with the borrower, disposing collateral security and alike. To ensure the fastest recovery of loan and to reduce litigation costs, banks also followed strategies like continuous persuasion to personal guarantors, , creating social pressure, group visit, etc. (Table 7.7)

Table 7.7: Strategies Used in Collecting Money from Habitual/Willful Defaulters

#	Particulars	Frequency
1	Taking Legal Action	14
2	Meeting with the Borrower	10
3	Disposal of collateral security	9
4	Issuing reminder letter	8
5	Continuous persuasion to personal guarantors and creating social pressure	8
6	Rescheduling	7
7	Group visit of Special Asset Management Department (SAMD) & Relationship Manager (RM)	4
	Total	**n=30**

Source: *Researchers' calculation based on primary data.*

7.7. Measures Applied for Recovery Purpose except Court Settlement

Loan recovery using different measures except court settlement, is considered as comparatively a comfortable measure since it saves time and reduces the litigation cost. In 2020, respondent banks were steadily relied upon practicing loan rescheduling and restructuring (Table 7.8). There was a significant increase in sale of loan, followed by ADR and using recovery agent as measures applied for recovery purpose except court settlement by banks in 2020 over 2019.

Table 7.8: Measures Applied for Recovery Purpose except Court Settlement

#	Particulars	Response						
		2020					2019	Change
		SOCBs	SBs	PCBs	FCBs	All Banks	All Banks	
1	Rescheduling and restructuring	100.00	100.00	100.00	100.00	100.00	100.00	0.00
2	Negotiation	100.00	100.00	100.00	100.00	100.00	96.77	3.33
3	Arbitration	100.00	100.00	80.00	100.00	83.33	62.96	32.35
4	Alternative dispute resolution (ADR)	100.00	0.00	89.47	100.00	86.96	50.00	73.91
5	Recovery agent	100.00	0.00	78.95	100.00	79.17	48.28	63.99
6	Sale of loan	0.00	0.00	47.06	100.00	50.00	17.86	180.00
7	Others, if any	0.00	0.00	30.00	100.00	33.33	3.85	766.67
	Total	**n=3**	**n=1**	**n=23**	**n=3**	**n=30**	**n=32**	

Source: *Researchers' calculation based on primary data.*

8. Cases on Different Types of Borrowers/ Projects.

8.1. Case Study 1: Auto Rice Agro Industry- An Unsuccessful Venture Company

Talukder Auto Rice Agro Industries limited is a private limited company which is established under agro-based industry. The managing director of the company is Mr. Md. Atiul Haque (65), a freedom fighter. The other director Mr. GM Haider (51) is the son-in-law of the managing director. The project is located at East Mouati, Bausi, Post Office-Rupganj Bazar, Upazila-Barhatta, and District-Netrokona. The project is established aiming to produce and marketing rice, khud and kura from paddy.

The entrepreneurs of the project have no previous experience on Rice production (Milling) business. However, the managing director has some experience on paddy and rice trading business. At first, a project loan amounting Tk 1.62 crore (including IDCP 0.09 crore) was sanctioned and disbursed (loan : equity ratio- 50:50) by the bank on March, 2011, out of the total project costing of Tk 3.26 crore for setting up of the Auto Rice Mill.

In the year 2011, the project loan was completely disbursed. But lack of previous experience of the entrepreneurs on auto rice mill, they built paddy shade in lieu of established dryer machinery in the mill to dry the paddy. The entrepreneur tried to complete the work of the project by borrowing money from others due to inability to invest equity from his own sources; consequently, implementation of the project delayed i.e. timely implementation of the project was hampered as well as the project was not implemented successfully. Finally Project Completion Report was approved by the bank in 2012 after it went into trial production. The total working capital of the project was estimated at Tk 2.24 crore. The amount of the bank loan is determined Tk 1.56 crore on the basis of the debt equity ratio 70:30. Of this amount, a loan of Tk 1.20 crore was disbursed in April 2012, which was increased to Tk 1.50 crore in December of the same year.

The first installment of the project loan was recoverable in September 2012. But the borrower was not able to pay the installment on time. Since, there was no dryer in the design of the project; they built a paddy shed instead of dryer. As a result, they face acute problem to dry the paddy in the monsoon of rainy season. Moreover, the quality of the produced (rice) dried in the attic was worse than that of rice of auto rice mill. Consequently, they couldn't grab the market. The mill is in operation presently. But the loan installments have not been paid by the entrepreneur. Finally, the loan account became classified.

With a view to regularize the loan account, the project loan of Tk 2.30 crore and the excess over limit of working capital Tk 0.68 crore was rescheduled and blocked for the first time in 2015. In 2016, the project loan of Tk 3.39 crore and the excess over limit of working capital Tk 0.68 crore was rescheduled for the second time. In 2017, the project loan of Tk 2.79 crore and the overdue of excess over limit of working capital of Tk 0.65 crore was rescheduled for the third time. But loan amount remained unpaid.

Nevertheless, in March 2016, BMRE project loan of taka 12.19 crore (including IDCP 1.08 crore) was given to the entrepreneur. For the sake of smooth implementation of the BMRE project, the entrepreneur stated that the necessary equity would be raised from own and family support sources, practically which was not being provided by the entrepreneur. The first installment of BMRE loan was due for recovery on December, 2017, which was not paid on time by the borrower. That is why the BMRE project loan of Tk 12.19 crore (including IDCP 1.08 crore) was rescheduled for the first time in May 2018. The PCR of the BMRE project was approved by the bank in June, 2020.

At the latest, the borrower (2021) has applied for (1) 4th time reschedule of the original project loan of Tk 2.36 crore with overdue of excess over working capital Tk. 0.65 crore, (2) 2nd time reschedule of BMRE loan and (3) renewal of working capital of the original project for Tk 1.50 crore. However, the proposal remains unresolved as because nonpayment of the required down payment of Tk 3.03 crore and the excess over limit due for Tk 17.22 crore.

8.2. Case Study 2: Composite Textile - An Unsuccessful Venture

In 1995, Sonali Bank Limited as the lead arranger provided project loan of Tk 58.86 Crore in total project loan of Tk 131.863 Cr. The remaining 46.16 crore and 26.81 crore were provided by Janata bank and Bangladesh Development Bank, respectively. This amount was given under consortium finance with joint assessment made by the consortium banks. After completion of the project Sonali Bank Limited disbursed Tk 34.00 Crore as working capital for smooth operation of the project and in 2004.Afterwards, the working capital limit enhanced up to Tk 110 Crore by the Sonali Bank Limited.

The company is a composite (spinning, weaving, dying, printing and finishing) textile industy established on 50-acres of land which is the country's first biggest 100% export oriented textile industry. The project was established with 176 sophisticated looms and 37440 spindles dying, printing and finishing unit. It is operated on daily three shifts basis for 24 hours and 300 working days in a year. Yearly production capacity of the project 67,63,000 kg yarn, 1,43,48,000 meter fabrics, 4,00,00,000 meter yarn finishing and 4,14,000 kg yarn dying. The production of the project is facilitated by natural gas. Gas was being used directly in the factory. Besides, electricity produced from gas is used in the production of other accessories.

In 1994, after completion and compliance of all the formalities Titas Gas Transmission & Distribution Company LTD. provided connection of 20 PSI for boiler and 20 PSI for generator for smooth operation of the factory. The factory was operated properly and installments of the loan were being paid regularly until June, 2008.

After June, 2008, supply of gas has, however, been reduced gradually by the gas company and eventually it became 0 PSI. In this circumstance, the factory couldn't be able to run smoothly and finally compelled to declare lay off on 22.10.2009. The information regarding the deterioration of the situation was conveyed to all the stakeholders, like Bangladesh Bank, Ministry of Power, Energy and Mineral Resources, Ministry of Finance, Ministry of Industry and Commerce and Titas Gas Transmission & Distribution Company LTD. The gas supply system was totally out of control of the borrower . The authority of the company tried their best to get the supply of gas, but failed to get the supply of gas in the project. As a result production of the factory was totally stopped. Consequently, the company failed to pay off the installment of project loan provided by banks.

On 25 February, 2014 representatives of the bank and financing institutions jointly investigated the project. During investigation, the representatives of banks directly contacted with the local gas office and seek their assistance to resolve the problem regarding shortage of gas supply with sufficient pressure in the project. An application has been submitted on 31 March, 2014 to managing director of Titas Gas Transmission & Distribution Company LTD regarding resuming gas supply. Response from the competent authority of the gas company was not found.

The borrower submitted interest remission with rescheduling application to the lending Banks, which is yet to be approved due to rejection of gas supply resumption proposal by Titas Gas Transmission & Distribution Company LTD. It hampered production of the factory and the company couldn't be able to generate income which leads to face acute liquidity shortage. Because of which the company failed to make payment of bank dues in timely manner. The borrower was very honest and had always good intention to pay off the loan installments. They were compelled to declare lay-off the factory only due to lack of sufficient gas supply, The borrower has paid total 192.10 Cr. Tk (Sonali Bank-87.231 Cr. Tk + Janata Bank-66.69 Cr. Tk + BDBL-38.18 Cr. Tk) against total loan tk 107.46 Cr. Tk (Sonali bank-49.29 Cr. Tk + Janata Bank-36.86 Cr. Tk + BDBL-21.32 Cr. Tk) financed by the consortium banks. It was observed that in spite of the positive attitude of entrepreneur as well as the financing institutions, the loan account was classified because of external reasons.

8.3. Case Study 3: Cold Rolled Steel Coil-A Successful Venture

Starting its business with Tobacco Industry since 1953, Abul Khair Limited has been initiated its business in different sectors i.e. Flat Steel in 1993, Milk Food in 1994, Baby Food in 1995, Cement Industry in 2002, Tea in 2004, Shipping Industry in 2005, Long Steel in 2010, Ceramic in 2011 and involving steel melting industry in 2015. The company is now conducting business smoothly with reputation in every field.

The company has been involved in 8 different industries and transacting regularly with 54 banks and 16 financial institutions. They have also transactions with 32 different financial institutions abroad. The company used first electric arc furnace method in steel refining in the country and recently invested in the world's largest vertical roller mill (VRM) recognized by Guinness World Records. The company produces C.R. coil from H.R. coil and C.I. sheets & G.P. sheets from C.R. coil and supply to the market. There are 4 C.R. coil plant/mill for production purpose through which the company is capable of processing 2,40,000 metric ton of H.R. coils per annum.

Abul Khair Ltd availed mixed current capital loan limit of Tk. 150.00 crore (LC Tk. 90.00 crore (with LTR facility of Tk. 50.00 crore within LC limit) + CC Hypo: Tk. 20 crore + CC Pledge Tk. 40.00 crore) in 2009 from Sonali Bank

Ltd., Wage Earners Corporate Branch,. Chittagong. A land of 6.63 acres has been taken as mortgage against the CC (Hypo) limit of Tk. 20.00 crore with a market value of Tk. 8.30 crore and forced sale value of Tk. 6.32 crore. Apart from this, 4 C.R. coil plant/mill and all the imported raw materials including all HR coils have been mortgaged against the CC (Pledge) limit of Tk. 40.00 crore given in favor of the company. In addition, personal guarantee of all the directors of Abul Khair Limited, corporate guarantee of all the associates of the company and advance dated cheque has been taken against the LC limit of Tk. 90.00 crore.

The average sales turnover of the company for the last 3 years is Tk. 1728.72 crore and the average net profit is Tk. 148.39 crore and the average interest income of the bank for the last 3 years is Tk.4.87 crore from the loan account. A review of the CIB report shows that the company has a total of Tk 12,600.45 crore loans including funded and non-funded liabilities in the name of 24 industrial units in various banks and financial institutions, each of which is unclassified. The loan given from our bank in 2009 in favor of the company has been renewed regularly and the loan has not been classified.

8.4. Observations of Case Studies

Sl. No.	Particulars
Case - 1 (one) Causes of Failure	Borrower's Perspective: 1. Starting business without prior experiences in the same line of business. 2. Mistake in project design 3. Lower quality of products. Expecting to make more profits by supplying rice to Government warehouse instead of selling to market. 4. Influencing authority to sanction loan 5. Providing equity by borrowing from family and friends. Bank's Perspective: 1. Lending without confirming the sources of equity of the borrower. 2. Refinancing BMRE project even though original project was not implemented properly and bank's dues were not paid. 3.Lack of examining technical aspect accurately.

Case - 2 (two) Causes of Failure	Borrower's Perspective: 1. Failure to continue gas connectivity.2. Failure to address the political issue. Bank' Perspective: 1. Dearth of knowledge about projecting the impact of political change on the project. 2. Lack seriousness in examining gas connectivity.
Case- 3(Three) : Causes of Success	Borrower's Perspective: 1. Experience in the business for long 68 years. 2. Efficiency in producing high quality products. 3. Honesty in repaying bank's loan 4. Excellent turnover and profit . 5. Highly educated directors of the company. Bank's Perspective. 1. Maintaining regular relationship with banks & NBFIs. 2. Finance backed by good and sufficient collateral..3. Analyzing the loan proposal independently.

Source: *Three case studies placed above.*

9. The Issues Raised in Credit Review 2019 and Their Status in 2020

The issues raised in the 2019 credit review, have been tabulated below along with their status in 2020. Issues like Negative Growth of Industrial Term Loan to SMEs, credit scoring model for SME financing , application of non-legal measures in collecting loan and MIS for declined application slightly improved, while some other issues, aggravated in the year 2020 compared to 2019 (Table-9.1).

Table 9.1: The Issues Raised in Credit Review 2019 and Their Status in 2020

Sl.	Issues of 2019	Status in 2020
1.	Negative Growth of Industrial Term Loan to SMEs	Improved
2.	Shrinkage of Credit to Agriculture, Fishing and Forestry	Almost Similar
3.	Limited Bank Financing to the New Sector	Deteriorated
4.	System of Taking Assessment Test for Selecting Executives for Loan Approval	Same as Before
5.	Credit Scoring Model for Small Enterprise Financing	Improved
6.	Accountability of Auditors for Manipulated Audit Report	Same as Before
7.	Scarcity of Financial and Industrial Data	Deteriorated
8.	Unreliable External Credit Rating Report	Deteriorated
9.	Possibility of Declining Loan Giving Capacity of Banks Due to Delayed or Nonpayment of Existing Bank Loan	Same as Before
10.	Non-Legal Measure of Loan Recovery	Improved
11.	Finding out Buyers for Selling Mortgaged Assets	Same as Before
12.	Corporate Guarantee Approved in the Board Meeting of the Corporate Guarantor	Deteriorated

13.	COVID-19 and its Effects on NPL and Loan Loss Provisioning	Improved thanks to relaxation of policy on provision requirement
14.	Maintaining MIS of Declined Application	Improved
15.	Lack of Analyzing the Reasons of Loan Rejection	Same as before
16.	Director's Loan Information	Same as Before
17.	Amount under Refinance Schemes Offered by Bangladesh Bank	Improved

Source: *Review of Credit Operation 2020.*

10. Challenges Observed in Credit operation in Banks in 2020 and Possible Solution

10.1 Declining Growth of Bank Credit

The rate of overall bank credit growth continuously declined over a period of three years from 2018 to 2020. In 2018, bank credit grew by 15.17 percent which came down to 11.87 percent in 2019 and to 10.58 percent in 2020. In addition, decreasing credit growth in agriculture, fishing and forestry was also found. The credit growth in the year 2019 and 2020 were slightly inflated mainly because of increase of the amount of arrear loan due to slow collection.

It is crucial to understand the real magnitude of the problem. Also, the reasons of declining growth are required to be uncovered. Lockdown due to Covid-19 is surely one of the major reasons of declining growth rate of bank credit in 2020. Particularly, dilemma in fresh investment and business expansion decision were the major causes of declining credit in 2020. However, growth of credit was showing decreasing trend even before starting COVID. Actions like lack of quality infrastructure across the country, nonexistence of ease of business at the expected level, limited items in our production and export basket and failure to spread business and bank finance to sub-urban and rural areas are therefore needed to be undertaken.

10.2 Rising Credit Concentration in Trade

In 2020, around 33.99 percent of all banks' loan was outstanding in the trading sector which was slightly over 1 percent higher compared to 2019. Higher credit concentration in trade may lead to speculation and increase credit concentration risk of banks.

Banks may be encouraged to give more loans to import replacement manufacturing concerns. Additionally, financing more to cottage, micro, small and medium categories may lessen the dominance of trade financing. This will, in turn, increase domestic production, accelerate GDP growth and enhance employment of the young population of the country. Authority may contemplate policy as well as financial support in this respect.

10.3. Limited Bank Financing to the New Sector

Disbursement of banks' loan is mostly made in the existing sector. As compared to 2019, loans to new and innovative sectors declined by 61.34 percent in 2020.

If bank allows more loans to the new sector, it will encourage entrepreneurs to undertake innovative venture which will accelerate the pace of economic growth of the country. Banks may allocate a certain portion of loan amount to new sectors each year through contemplating new sector financing as part of banks' bank lending policy. Government / BB might create a special fund so that banks feel interest to provide loan to new venture. Undertaking research initiatives before lending to new areas is also necessary for reducing credit as well as performance risk.

10.4. Reshaping Organization's Structure for Quantitative and Qualitative Analysis in Implementing ICRRS.

Most of the banks were yet to fully reshape organization's structure for implementing ICCRRS. Only 36.00 per cent of respondent banks reorganized their departments as per the requirements of ICRRS guideline.

Banks need to create two separate departments for completing 'quantitative part as well as qualitative part of ICRRS independently. Information necessary to input is also necessary to be examined thoroughly before placing in the excel format of ICRRS. Further, Chief Risk Officer (CRO) requires to go through the inputs as well as rating achieved by the borrower very thoroughly as he/she needs to sign the executive summary report of the ICRR score. These preconditions are required to be fulfilled through reshaping the organization structure for getting the appropriate ranking with a view to selecting eligible borrowers.

10.5. Unavailability of Financial and Industrial Data

As per ICRRS, 60 percent weight assigned for the quantitative assessment which depend on the financial data. However, around 77 percent of sampled banks opined that they are unable to get proper and audited financial data for their quantitative assessment. In some cases, bankers prepare financial statements based on the inputs obtained from the clients that may not reflect the actual scenario of the industry. As a result, there is a possibility for selecting a wrong borrower .

Government agencies may create a database on various industries and make them available for the stakeholders even with minimum fees. Commercial banks may also create data bank with relevant information for its own use through collecting data from suppliers, buyers, employees, spouse of the borrowers, etc. Strong monitoring might be established by the respective authorities on the audited firms so that authentic data can be available for the analysis.

10.6. Attention by Banks to the Group Wise Exposure

Some banks were not attentive enough to the group wise exposure of credit which would increase the credit concentration risk of banks. Particularly, SOCBs are lagging behind in this respect.

In order to reduce the credit concentration risk, banks need to always pay their attention towards the group wise exposure along with sector and division wise exposure. Besides, adversity may touch successful single unit where banks might finance if group of industries could not do well.

10.7. Eligible Collateral Security Coverage as Per CRM Guideline

Some banks did not consider the eligibility of collateral security coverage as per CRM guideline. As a result, banks may calculate either more or less value of the security. If banks consider less value, some of the eligible borrower may not be included in the quality loan customers list, and vice versa.

In this regard, banks necessitate strictly follow the CRM guideline for the collateral and security eligibility.

10.8 Problems with Refinance Schemes

Major problems that bankers faced in 2020 with refinancing scheme were delay in getting approval from Bangladesh Bank and complex documentation and reporting system, poor loan recovery rate and delay in reimbursement. These problems might discourage both banks and borrowers in offering and availing funds under refinancing schemes.

Refinance schemes funded by Bangladesh Bank, IDA, ADB and JICA have been facilitating development of sectors/ community which are lagging behind or important for economic development of the country. More funds along with smooth operation of refinance schemes are expected as these financing are ensuring duel paybacks like social and economic benefits.

10.9 Lending under Stimulus Package

Unreliable data, lack of proper documentation, clout of influential borrowers, problems in proper assessment and demand for quick disbursement of funds were obstructing smooth credit operation relating to stimulus package. Particularly, almost 50% of the respondent banks feel that there is a possibility that amount of NPL may increase since most of the beneficiaries of the stimulus package failed to utilize the funds appropriately.

Banks might use their long-term relationship with customers in selecting borrowers and disbursing appropriate loan amount under stimulus package. Particularly industries did better during the time of pandemic might get more funds whereas other industries might be the subject of thorough scrutiny before financing. Besides, banks needed to be more cautious in identifying the actual needs of the borrower, selecting the most affected sector, and continuous monitoring of the borrowers so that they couldn't divert the purpose of the funds. A separate wing can also be created to review and monitor the loan given under stimulus package.

10.10. Gas Connectivity

In a case study, it was found that an enterprise was closed owing to gas shortage resulting in failure of the borrower to repay bank's money.

A large number of gas-based industrial units across the country made to operate below their normal capacity due to gas crisis. Particularly, it takes acute shape in the winter season. Banks have to consider this issue seriously in case of any type of lending.

10.11. Recovery Except Court Settlement

In 2020, respondent banks relied more upon practicing loan rescheduling and restructuring in managing NPL. There was a significant increase in sale of loan, followed by ADR and using recovery agent as measures applied for recovery purpose except court settlement by banks in 2020 over 2019.

Loan recovery using different measures except court settlement was obviously a comfortable way to reduce NPL since it saves time and reduces the litigation cost. However, even after various efforts we failed to bring NPL level at rational level. Authority may think for the establishment of Asset Management Company (AMC) like South Korea, Malaysia and Thailand for getting rid of NPL.

10.12 Improvement in the Overall Compliance Level with CRM Guidelines and the Way Forward

In 2020, there was improvement in the compliance level with CRM compared to previous year. However, we have to remember that risk compliance and risk management are not the same thing. Mere compliance with CRM guidelines may not reduce the NPL problems of the banking sector of the country. If banks are compliant with CRM guidelines, the regulator may be satisfied and will not impose any fine. However, this is not enough for reducing bank level credit loss.

Banks need to manage credit risk proactively in addition to compliance with CRM guidelines. Bank's approaches like determining creditworthiness. knowing customer properly, conducting due diligence, maintaining rational leverage and setting accurate credit limit are required to be practiced meticulously without any influence to reduce credit risk. Therefore, mere high level of compliance with CRM is not an end in itself. Rather banks need to go beyond to reduce their loss of resources from credit related transactions.

Banks may face problems in collecting installments of regular loan or loan given under stimulus package because of obtaining necessary papers and documents, tendency of borrowers to linger repayment as prevailing lower interest rate and most importantly mind set of the unscrupulous borrowers who are always seeking reasons not to repay the bank loan. Hopefully, strengthening banking regulation and supervision, following internal control and compliance system meticulously by banks, improving corporate governance, tightening efforts for loan recovery system, improving business operation efficiencies would help the banking sector to improve the overall credit operations in banks either COVID will exist or not in future.

References

Farashuddin, Mohammed (2020), 'Financial Sector and Its Development since Independence of Bangladesh' *Bank Parikrama*, Volume XLIV & XLV.

Islam, Mirza Azizul (2020), 'Financial Sector Development: Progress and Predicaments' *Bank Parikrama*, Volume XLIV & XLV.

Kabir, Fazle (2021), *Speech* printed under the Title of 'Bangladeshi Bank May Face Asset Quality Challenge in Post-covid Situation' The Financial Express, August 18.

Kabir, Fazle (2019), *Speech* given in Eighteenth Nurul Matin Memorial Lecture on Ethics in Banking, organized by Bangladesh Institute of Bank Management (BIBM), Dhaka.

Rahman, Matiur (2020), 'Role of Banking Services in Building "Sonar Bangla": Some Progress, Pitfalls, and Prescriptions' *Bank Parikrama*, Volume XLIV & XLV.

Paper Two

INTERNAL CONTROL AND COMPLIANCE OF BANKS

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List of Abbreviation

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
ACB	Audit Committee of Board
AML	Anti-Money Laundering
BAMLCO	Branch Anti-Money Laundering Compliance Officer
BB	Bangladesh Bank
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BoD	Board of Directors
BRPD	Banking Regulation and Policy Department
BSEC	Bangladesh Securities and Exchange Commission
CAAT	Computer Assisted Auditing Techniques
CAMLCO	Chief Anti-Money Laundering Compliance Officer
CCC	Central Compliance Committee
CCU	Central Compliance Unit
CEO	Chief Executive Officer
`CFT	Combating the Financing of Terrorism
CTR	Cash Transaction Report
COSO	Committee of Sponsoring Organizations of the Treadway Commission
DCFCL	Departmental Control Function Checklist
DOS	Department of Offsite Supervision
FCBs	Foreign Commercial Banks
FX	Foreign Exchange
GB	General Banking
IA	Internal Audit
IASFD	Internal Audit Surveillance and Follow-up Department
ICC	Internal Control and Compliance
ICCD	Internal Control and Compliance Department
ICS	Internal Control System
ICT	Information and Communication Technology
IIA	Institute of Internal Auditors
IFIs	Islamic Financial Institutions
ITP	Independent Testing Procedures
KYC	Know Your Customer
LDCL	Loan Documentation Checklist

MD	Managing Director
MoF	Ministry of Finance
NPL	Non-Performing Loan
PCBs	Private Commercial Banks
QOR	Quarterly Operations Report
SMT	Senior Management Team
SOCBs	State-owned Commercial Banks
STP	Suspicious Transaction Report

Internal Control and Compliance of Banks

1. Introduction

Banks provide variety of services to their clients with a branch network. In doing so, banks become exposed to a number of risks that need to be properly managed with a prudent balance between profitability and risk tolerance level. As the smooth growth of the banking business rests on the public confidence, banks need to take utmost care in ensuring the safety of the depositors and soundness of its operations with maintaining a high quality of services in a uniform way to its numerous clients. The mechanism put in place on a permanent basis to control the activities in an organization, both at central and departmental/divisional level is known as internal control (IC). The financial health of a bank and its quality of operation ultimately depend on the strength of internal control environment (Siddique et al, 2015). Effective IC is a critical component of bank management and a foundation for the safe and sound operations of banks.

A well-functioning financial sector is built upon (i) prudent regulatory norms with comprehensive and rigorous supervisory system, (ii) meticulous external audit and (iv) self-control through internal control system (ICS). Among these, IC is considered as the most vital and effective one as the deficiency in ICS cannot be corrected by any other approaches of regulation. As per COSO (2013), IC provides management and board of directors with added confidence regarding the achievement of objectives. It provides feedback on how a business is functioning, and it helps reduce surprises. Internal control is a crucial aspect of an organization's governance system and ability to manage risk. It ensures the achievement of an organization's objectives and creating, enhancing, and protecting stakeholder value (IFAC, 2012).

It is universally recognized that ICS achieves three objectives for a bank that are (i) achievement of business objectives, (ii) ensuring reliability of financial reporting, and (iii) compliance with laws, regulations and policies. A robust ICS results in better risk management practices in terms of identifying, measuring, monitoring and mitigating the risks. Aksoy & Mohammed (2020) identified internal control function as critical "safety valve" for the mutual interests of all stakeholders, and for business goals, corporate governance, quality assurance, corporate risk management, transparency, accuracy, accountability, sustainability, and competitiveness. A critical element of a bank's ability to operate in a safe and sound manner is the adequacy of its internal control environment (Bangladesh Bank, 2018).

Weak or ineffective internal control has caused losses in many banks and has contributed to the failure of others around the world (Nandum et al, 2017). Udoayang and Ewa (2012) found that a strong internal control mechanism prevents staff fraud while a weak internal control mechanism exposes the system to fraud. Lack of adequate ICS is considered as the single greatest factor contributing to operational failures in banks (Siddique et al., 2019). Compliance on the part of the banks with internal controls reduce risk taking behavior and the probability of experiencing bank failure (Jin et al.,2013).

The importance of IC in strengthening the governance system of organizations is highlighted in different corporate governance literature (Maijoor, 2000). The long-term confidence of stakeholders, government, suppliers, investors, customers in the areas of reporting, accountability and reliable information, is enhanced with effective IC systems (Rittenberg & Schwieger, 2001). Bhagat and Jeffers (2002) find external governance and other factors as capable of aligning the interests of managers and owners. However, internal governance does this better and goes a long way to deepen ethical behavior on the part of managers. Internal controls minimize the agency costs and thus increase profits and sales of companies (Alves & Mendes, 2004; Fernandez-Rodriguez, Gomez-Anson & Cuervo-Garcia, 2004; Goncharov, Werner & Zimmermann, 2006). IC improves the image and reputation of listed companies and affect share price positively (Fombrun & Shanley, 1990) that was confirmed by Hart (1995) who contended that reducing agency costs increase firm value.

The financial sector of Bangladesh is largely dominated by the banking sector in the absence of a well-functioning and matured stock market. So far, the banking sector experienced a commendable steady growth in terms of financial deepening such as deposit-GDP ratio, credit-GDP ratio, number of bank branches, number of people brought under financial services, variety of products and so on. This impressive growth led to increase the competition and heightened the level of different risks such as credit risk, market risk, operational risk, and strategic risk. In the backdrop of the increasing complexity of the banking business, internal control and compliance (ICC) is now considered as being of paramount importance for the bank management. To establish a vibrant and robust IC culture in our banking sector, Bangladesh Bank (BB) issued a guideline on ICC along with other core risk management guidelines in 2003 that was revised considerably in 2016. As is expected, BB has made a number of modifications relating to the ICC and corporate governance of the banks to address the emerging issues or events. Observation and findings demonstrate that banks are progressing towards developing a strong internal control environment through a combination of self-driven measures and ensuring compliance with the regulatory standards. The present study provides an extensive review of the operations of internal control and compliance division (ICCD) of different banks in our country for the year 2020. The objectives are to examine the similarities and variations of internal control environment across the banks, to find out the strengths and weaknesses of ICC operations and to identify the changes in recent times by comparing the current ICC environment with the previous year. The world economy was hit hard by one of the worst pandemics in the history with the outbreak of COVID-19 at the beginning of the 2020. The pandemic has had a massive impact on the banking industry due to corona-led disruption in the economic activities. The banking sector of Bangladesh, like most of the other sectors, had to go through a very hard time and painful adjustment process in 2020. The regular operations of ICCD was disturbed in different degrees due to social distancing especially in the first half of the year. So, the current review attempts to find out the responses and experiences of the banks in dealing with the pandemic as well.

After the Introduction along with the methodology and limitations, Section 2 presents a standard framework of ICS and describes its components. The regulatory framework of ICC in domestic and international context is presented in Section 3. The major part of the study, i.e. review and analysis of the activities of ICCD of banks in Bangladesh is discussed in Section 4. The paper concludes by presenting a number of observations and recommendations in Section 5.

1.1 Methodology with Limitations of the Study

The study reviewed and summarized the activities of ICCD for the year 2020 with an emphasis given on the activities of the audit units considering the vast impact of COVID on regular on-site audit of the banks. Comparative status of 2020 and 2019 has been presented in the findings. Both primary and secondary data have been utilized in getting the findings of the study. The source of primary data was a questionnaire sent to the ICCD of all the banks; however, responses were received from thirty-two scheduled banks (Appendix-I) from three categories viz. State-Owned Commercial Banks (SOCBs), Specialized Banks (SBs), and Private Commercial Banks (PCBs) including Islamic banks. It is noted that 75 percent of the responded banks were identical in the year 2020 and 2019. Besides, a focus group discussion (FGD) using online platform was arranged, which was participated by 60 banks executives from 19 banks in the year 2020 (Appendix-II). Secondary data were collected from various publications of Bangladesh Bank, Basel guidelines, framework issued by COSO, Institute of Internal Auditors (IIA), the previous review reports of BIBM on ICC, and various published research articles. The findings of the study have mainly been presented in tabular forms. The report has incorporated the valuable suggestions and opinions of the review workshop, where suitable.

It is important to note that the fundamentals of ICS, its components and objectives, regulatory requirements are well established. As the review is being done after a regular interval, significant difference in some parts of the report will not be found among the various reports. As the study was based on the survey of 32 banks, one needs to be careful in generalizing the observations of the study. Comparison between 2020 and 2019 of various indicators needs to be interpreted carefully, as the banks covered in those two years are not homogeneous.

2. Internal Control System: A Standard Framework

2.1 Framework of Internal Control System (ICS)

One of the broadly accepted definitions of IC has been developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The COSO defines that IC is a process which is effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance (COSO, 2013). There are three objectives of IC, such as performance objective (achievement of a bank's mission and vision), information objective (timely, accurate, and comprehensive reporting) and compliance objective (conducting activities and taking specific actions in accordance with applicable laws and regulations). IC is developed for safeguarding the assets, ensuring the preparation of financial statement free from misstatement, minimizing fraud or error, and keeping business performance in line with ultimate goals of the organization. According to the COSO (2013), internal control has five integrated components such as – (a) Control Environment; (b) Risk Assessment; (c) Control Activities; (d) Information & Communication; and (e) Monitoring which are depicted in Figure 2.1.

Figure 2.1: Relationship of Objectives and Components of IC

Source: *COSO (2013)*

IC is not a structure rather a series of processes. It is not a separate activity disconnected from the rest of business activities, rather is an integral part of those activities (BB, 2016). For any bank, there are three key control functions such as risk management, compliance, and internal audit. The first two of these control functions constitute the second lines of defense against mishaps and the final, or third line of defense is the internal audit function.

2.2 Functions of Internal Control and Compliance Department (ICCD)

ICCD executes its activities through three units: (a) Internal Audit Unit, (b) Monitoring Unit, and (c) Compliance Unit, which are interrelated and interdependent with each other. Moreover, BB guidelines require that the Head of the ICCD is responsible for both monitoring and compliance related tasks. He/she will be responsible for reporting of internal control and compliance (ICC) and monitoring activities of the bank to senior management. The Head of Internal Audit (IA), although being a part of ICCD, has to report directly to Audit Committee of the Board (ACB) and his/her performance is also assessed by the Chairman of the ACB. Internal control system is not different from other banking activities rather it is an essential part of each and every functions of banking. In fact, each and every one of a bank starting from the Board of Directors (BoD) to the lowest level employee is connected with the implementation of ICS. Nevertheless, ICCD remains dedicated to look after whether the bank is following regulatory guidelines, institutional policies and procedures set by/and approved by its BoD and whether there is any lack of internal policy and procedure in any areas of operations. So, the functions of ICCD are not the parameter of the effectiveness of overall ICS rather it is collective performance of branches and various departments of the head office.

2.2.1 Functions of Internal Audit Unit

The Institute of Internal Auditors (IIA) posits that IA activities help an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management and control processes. Internal audit is defined as an independent, objective assurance and consulting services designed to add value and improve an organization’s operations (IIA, 2016). Internal audit which is a part of an organization's internal control framework is a master control that checks whether all other controls are working properly. So, we can say that IA is an overarching control over all other controls. Internal auditors are not accountable for implementing specific control procedures. The auditors' part is to audit bank's internal control policies, practices and procedures to assure that controls are adequate to achieve organization's mission. Internal audit, on principle, should not be involved in any management functions. Different cells in a typical audit department are presented in Box 2.1.

Box 2.1: Different Cells under IA

- General Banking Cell- to audit general banking operations of branch
- Credit Cell- to audit credit operations of branch
- FOREX Cell- to accomplish audit on foreign exchange operations of branch
- IS Cell- for information system audit at the branch level
- Head Office Cell- to execute audit in department/division of the head office
- Subsidiaries Cell- to conduct audit on subsidiaries and other foundations
- Shariah Cell- to perform Shariah audit of an Islamic bank
- Concurrent Audit Cell – to conduct audit in the selected branches/units at occurrence of events
- Vigilance and Special Inspection Cell- to undertake special audit and inspection as and when instructed by the chairman of the BoD, the Managing Director and the Head of ICCD

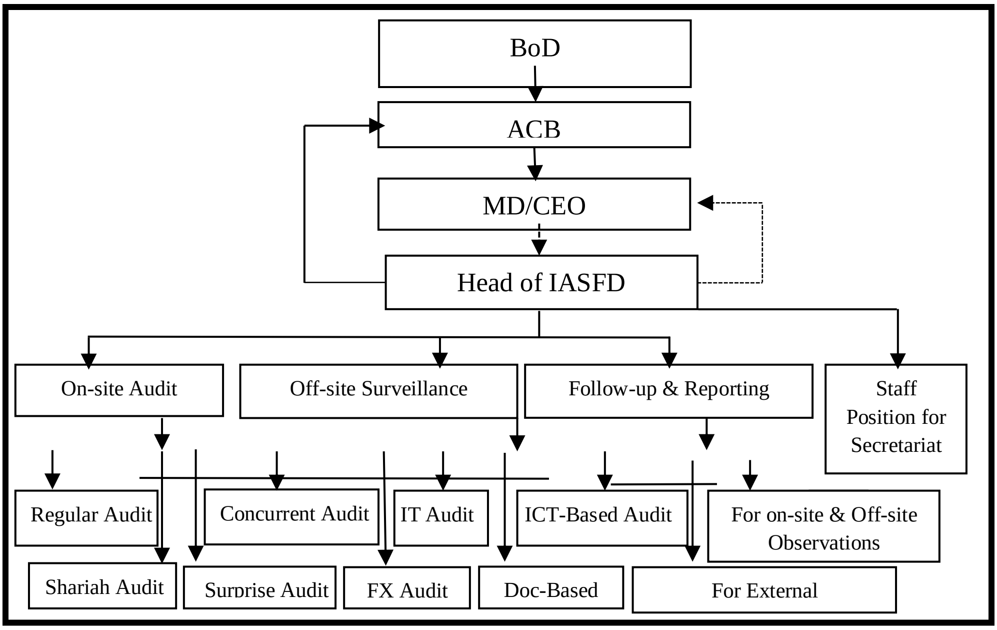
2.2.2 Functions of Monitoring as Surveillance Unit

Monitoring unit, one of the units of ICCD is responsible for off-site surveillance. The unit basically monitors day to day activities of the branches/departments with approved policies and procedure facilitated by ICT infrastructure. It also evaluates various report and information received from the branches at different frequencies. The unit assesses Departmental Control Function Checklist (DCFCL), Investment/Loan Documentation Checklist (LDC) and Quarterly Operation Report (QOR). As a part of monitoring, they instruct the branch/office to rectify the exception and report the same. If considered necessary they may recommend to the IA unit for conducting an audit/inspection on the specific deviation. The unit may be assigned to prepare “Self-Assessment Report of Anti-Fraud Internal Control” of the bank by collecting various documents/compliance from related divisions/departments. After being ensured compliance, they send it to Bangladesh Bank on quarterly basis. The unit may also be asked for preparing Annual Health Report of the bank and submit it to the Chief Executive Officer and the ACB for onward submission to the BoD and BB. As a part of daily monitoring activities, they monitor employees/staff account, mandatory leave and employee transfer, deposit and investment/loan account, various general ledger heads through software in real time and if find anything unusual, report to the SMT and the BoD through the Head of ICCD.

2.2.3 Functions of Compliance or Follow-up Unit

The compliance unit of ICCD is responsible for following-up that a bank complies with all observations raised by IA, external audit, and BB inspection. They prepare a compliance report for onward communication with SMT and ACB. Now-a-days, the compliance unit is working in the bank in proactive fashion as indicated in Bangladesh Bank ICC Guideline 2016. The unit contributes in formulation of policies and procedures, dissemination of knowledge and awareness, issuance and maintenance of circulars, arrangement of training on regulatory issues in the bank with the help of training institute and maintenance of liaison with regulators regarding compliance procedures/clarification on regulations. They take necessary actions for compliance to minimize the lapses within the prescribed time-frame. They organize weekly communication meeting and maintain archive of audit report. An organizational structure of ICCD along with different units is portrayed in the following figure.

Figure 2.1: Proposed Organogram of ICCD/IASFD



Source: *Based on Study Findings*

Notes:

i) *Board of Directors (BoD) will be the supreme authority for formulation of standard operating procedures (SOP) and monitoring overall activities of banks.*

ii) *Audit Committee of Board (ACB) will be a part of the board entrusted to evaluate the overall internal control system (ICS) of banks and activities of IASFD.*

iii) *The Chief Executive Officer (CEO) will take necessary actions to execute all observations and recommendations made by the IASFD through ACB. CEO may provide recommendations to the IASFD (dotted line) but should not restrict it to do anything.*

iv) *The head of Internal Audit Surveillance and Follow-up Department (IASFD) supervises all activities of the department. He/She will convey information/reports to ACB and CEO parallel (dotted line).*

v) *On-site audit will conduct regular audit according to the audit plan. Besides, this unit will conduct surprise audit, IT audit, FX audit and Shariah audit. Moreover, there will be a pool of concurrent auditors under on-site audit unit for conducting high-value worthy branches (e.g. top 20 branches).*

vi) Under off-site surveillance unit, two sub-sections will be there – one, surveillance using ICT infrastructure and two, based on collected documents and reports.

vii) Follow-up and reporting unit of IASFD will be considered as contact point for tracking reporting status of regularizing internal and external audit observations. The unit will collect all observations and recommendations from on-site audit, off-site surveillance, external audit and regulators and follow-up implementation status. At certain frequency, it will communicate compliance status to the ACB, SMT and regulators.

viii) SMT, off-site surveillance unit and follow-up & reporting unit may recommend to on-site audit unit through the head of IASFD to conduct special audit.

2.3 Internal Audit as Third Line of Defense

The effectiveness of an organization depends on the risk management of the functions of different lines. There are three lines of defenses in a bank. Under the first line of defense, operational management has ownership, responsibility and accountability for directly evaluating, controlling and mitigating the risk. Here, the officials are directly involved with the operations and supposed to abide by the rules and regulations provided by the management. Second line of defense involves the activities covered by several components of internal governance such as compliance, risk management, quality-control, and so on. This line monitors and facilitates the implementation of effective risk management practices by operational management. This approach of internal audit is risk based and the function is to provide reasonable assurance to the management and those charged with governance that ICS is in place and working properly.

Internal audit acts as third line of defense through detection of lapses. Internal audit deals with the issues that are mostly important for the survival and growth of an organization. Because, they not only detect the lapses but also work as consultants. They recommend the ways to the officials to solve the lapses. The work space of internal audit depends on the degree of mistake or deviation committed by first or second line of defense. Usually, auditors check the compliance of the task done by the operational unit. After detecting the deviations, internal audit recommends required measures to prevent the lapses from occurring in the operation. Therefore, IA will not be an effective mechanism if the recommendations provided by IA are not implemented properly and in a timely manner.

3. Regulatory Framework of Internal Control and Compliance (ICC)

3.1 Institutional Framework of ICS in Bangladesh

The banking industry of Bangladesh comprising four categories of banks (SCBs, SBs, PCBs, and FCBs) is regulated by a number of authorities. Registrar of Joint Stock Companies and Firms (RJSCF) is the authority which keeps track of all ownership related issues as prescribed by the laws in Bangladesh. Bangladesh Securities and Exchange Commission (BSEC) is the regulator of the country's capital market. Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange are responsible for listing of companies and monitoring their activities. Besides, there are three professional accountancy bodies in Bangladesh; (i) The Institute of Chartered Accountants of Bangladesh (ICAB), (ii) The Institute of Cost and Management Accountants of Bangladesh (ICMAB) and (iii) The Institute of Chartered Secretaries of Bangladesh (ICSB). The Institute of Chartered Accountants of Bangladesh (ICAB) jointly with the National Board of Revenue (NBR) has developed and launched the Document Verification System (DVS) in November 2020 with a view to bringing discipline and ensuring transparency, accountability and good governance in the government revenue and financial reporting system. As per the instruction of ICAB, all practicing members of the institute are bound to generate Document Verification Code (DVC) using DVS and put the DVC along with their signature while they sign any audit report other than management audit and internal audit from December 01, 2020 and onwards. Without mentioning DVC, audited financial statement signed by any practicing member shall be considered as invalid document. The Financial Reporting Council (FRC), Bangladesh was established on 9 September 2015 as an independent regulatory agency. The FRC acts as a regulatory authority for the professional accounting, auditing and actuarial activities at all the public interest organizations of Bangladesh. It has instructed the auditors to use DVC who will conduct auditing on the company including public interested organization with effect from April 01, 2021.

Bangladesh Bank is empowered to regulate and supervise the banking companies of the country vide Article 7A(f) of the Bangladesh Bank Order 1972, Section 44 of the Bank Companies Act 1991, Section 19A of the Foreign Exchange Regulation Act 1947 and Section 23 of Money Laundering Prevention Act 2012. There are several departments and offices of BB for discharging its responsibilities. Banking Regulation and Policy Department (BRPD) is mainly responsible for issuance of prudential regulations and guidelines to ensure a sound and stable banking system. Department of Banking Inspection having eight departments (named as DBI 1, DBI 2, and so on) is entrusted with the responsibility of conducting on-site inspections of scheduled banks in Bangladesh. Department of Off-Site Supervision (DOS) conducts off-site supervision of the banks. DOS monitors the soundness and stability of the banking system through CAMELS rating, liquidity and capital adequacy monitoring, assessment of risk profile, evaluation of corporate governance, large loan monitoring and appraisal of capital market investment. Under the structural reforms of DOS, a total number of six Bank Supervision Specialist (BSS) sections were formed in 2013 to monitor all individual scheduled banks. Credit Information Bureau (CIB) was set up in 14 BB on 18 August 1992 with the objective of minimizing the extent of default loans. Integrated Supervision Management Cell was established on February 16, 2015 with a view to strengthening ongoing banking supervision activities by Bangladesh Bank through Integrated Supervision System (ISS). The cell has been subsequently renamed as Integrated Supervision Management Department (ISMD). The core responsibility of the Financial Stability Department is to examine the stability of the financial system of Bangladesh through macro-prudential analysis. Bangladesh Financial Intelligence Unit (BFIU) is the central agency of Bangladesh responsible for analyzing Suspicious Transaction Reports (STRs), Cash Transaction Reports (CTRs) & information related to money laundering (ML)/financing of terrorism (TF) received from reporting agencies & other sources and disseminating information/intelligence thereon to relevant law enforcement agencies.

3.2 International Regulation

The Institute of Internal Auditors (IIA) revised the 'International Standards for the Professional Practice of Internal Auditing' in October 2016 which has been effective since January 2017. The standards identified that the purpose, authority, and responsibility of the internal audit activity must be formally defined in an internal audit charter which would be consistent with the mission of internal audit. IIA suggested that the internal audit charter must be reviewed by the chief audit executive and presented it to the senior management and the board for approval. The standards also identify the knowledge, skills, and other competencies of internal auditors needed to perform their individual responsibilities. IIA also published the Code of Ethics which is expected to be applied by the internal auditors in conducting internal audit.

ISACA is an independent, nonprofit, global association that engages in the development, adoption and use of globally accepted information system (IS) knowledge and practices. Previously known as the Information Systems Audit and Control Association, ISACA now goes by its acronym only. It provides guidance, benchmarks and governance tools for enterprises that use information systems. Several certification programs like Certified Information Systems Auditor (CISA), Certified Information Security Manager (CISM), and Certified in the Governance of Enterprise IT and Certified in Risk and Information Systems Control credentials are coordinated by ISACA. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) released a major document named 'Internal control-Integrated Framework' in 1992 that has been revised in 2013. The framework covers definition, objectives, components and principles of Internal Control.

The Basel Committee on Banking Supervision (BCBS), a well global standard-setter for the prudential regulation of banks, issued a Framework for Internal Control Systems in Banking Organizations in 1998. It issued two major guidelines in the areas of internal control and internal audit. In addition, BCBS issued the Review of the Principles for Sound Management of Operational Risk and a consultative document for comments on Corporate Governance Principles for banks in October 2014. Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) developed thirteen governance standards for Islamic financial institutions (IFIs) namely (i) Sharia Supervisory Board: Appointment, Composition, Report; (ii) Sharia Review; (iii) Internal Sharia Review; (iv) Audit & Governance Committee for IFIs; (v) Independence of Sharia Supervisory Board; (vi) Statement on Governance Principles and Disclosure for IFIs; (vii) Corporate Social Responsibility Conduct and Disclosure for IFIs; (viii) Central Shari’ah Board; (ix) Shari’ah Compliance Function; (x) Shari’ah Compliance and Fiduciary Ratings for Islamic Financial Institutions; (xi) Internal Shari’ah Audit; (xii) Sukuk Governance; and (xiii) Waqf Governance. Islamic Financial Services Board (IFSB) is an international standard-setting organization which promotes the soundness and stability of the Islamic financial services industry by issuing global prudential standards and guiding principles for the industry. By August 2021, IFSB has issued 25 standards.

The International Organization of Supreme Audit Institutions (INTOSAI) is a worldwide affiliation of governmental entities which, so far, issued sixteen standards. Besides, the International Ethics Standards Board for Accountants (IESBA) is an independent standard-setting body that serves the public interest by setting robust, internationally appropriate ethics standards. The IESBA has issued International Code of Ethics for Professional Accountants (including International Independence Standards). The International Code of Ethics has been made effective since June 15, 2019.

3.3 Domestic Regulation

Bangladesh Bank issued one major guideline in the area of internal control in 2003 along with a set of other core risk management standards with a view to improving the risk management capacity of banks. In 2016, BB has revised the Internal Control and Compliance Guidelines and kept on issuing various circulars to strengthen the overall ICC culture in the banks.

Bangladesh Bank (BB) made mandatory for all scheduled banks to constitute Audit Committee of the Board (ACB) in 2002. ACB is responsible to evaluate internal control environment, financial reporting system, performance of the internal and external audit. The role and responsibility of the different board level committee is elaborately discussed in the corporate governance guidelines issued by Bangladesh Bank. Central bank has introduced new technique for implementation of the significant part of inspection report called “Quick Summary Inspection Report”. Banks/FIs are required to make necessary adjustment in their final accounts (Income Statement) of the respective year based on observation raised in the quick summary inspection report sent within two months of closing of the accounting year. Furthermore, BB also conducts core risk inspection, including internal control and compliance, as a part of risk-based inspection. Different ratings including ICC rating assigned by the BB are reflected in CAMELS rating system of the bank.

The Bank Company Act, 1991 assigns the responsibility to the external auditors of assessing the adequacy of IC and risk management system in a bank. External auditor will also provide detailed report of their observation (known as management report) along with auditors’ report to the shareholders. The role of ICC has been highlighted in the Bangladesh Bank’s guideline on Risk Based Capital Adequacy for banks (BB, 2010). BB, in another guideline titled Risk Management Guidelines for Banks (BB, 2018), has given some guiding instructions about compliance risk management and internal control mechanism. Each bank has to ensure regular monitoring of all activities included in “Self-Assessment Anti-Fraud Internal Controls Report” and submit a half-yearly report to BB.

According to the notification and subsequent amendments of Bangladesh Securities and Exchange Commission (BSEC) in 2006 and 2018, the listed companies should have an audit committee as a sub-committee of the Board of Directors to ensure that the financial statements reflect true and fair views of the state of affairs of the companies as well as a good monitoring system embedded within the business process. Besides circulating a checklist (selection criteria) for the appointment of independent directors, recently BSEC issued a notification requiring that the listing company will mandatorily make a disclosure regarding the appointment of independent directors where the Chief Executive Officer (CEO), Company Secretary, and Chief Financial Officer (CFO) will jointly certify that the regulatory requirements of an independent director are duly observed and submitted relevant documentation in support of the nomination for both existing and prospective independent directors with an immediate effect.

4. Findings and Analysis of ICCD Activities

This section summarizes data collected through questionnaire and discussion with key stakeholders covering different dimension of ICS, especially ICCD, of the banking industry of Bangladesh.

4.1 Overall Status of ICCD

Bangladesh Bank conducts CAMELS and ICC rating where later is a part of the former. The ICC rating mainly focuses on operational aspects whereas CAMELS accommodates all crucial aspects of a bank. Table 4.1 presents the CAMELS and ICC ratings of scheduled banks for the year 2019 and 2020 assigned by BB through a separate inspection program on the compliance status of core risk management guidelines. As per the Table, no bank scored 1 (strong) rating either in CAMELS or ICC in the year 2019 or 2020. It may be noted, in recent past (2018) a bank secured 'Strong' rating in ICC. It is also a matter of concern that the rating of three banks has deteriorated from 'Fair' to 'Marginal' in 2020 as compared to that of 2019.

Table 4.1: CAMELS and ICC rating of scheduled banks

Rating		No. of Banks in 2020		No. of Banks in 2019	
		CAMELS (Dec.)	ICC (Dec.)	CAMELS (Dec.)	ICC (June)
1	Strong	0	0	0	0
2	Satisfactory	38	29	38	28
3	Fair	7	23	10	21
4	Marginal	11	5	08	07
5	Unsatisfactory	1	0	1	01
Total		**57**	**57**	**57**	**57**

Source: *Bangladesh Bank*

As per requirement of BB guidelines on ICC in Bnaks, all banks have established separate ICCD and assigned an executive as the head (Table 4.2). However, few banks are still observed to have conflicting responsibility among the employees. It has been observed that banks do not have policy requiring specific academic qualification and experience for the post of ICCD head. In few cases, the Head of ICCD has been changed before competion of three years as a part of strategy or considering performance.

Table 4.2: The head of ICCD and portfolio (% of banks)

<table>
<tr><th colspan="2">Aspects</th><th>2020</th><th>2019</th></tr>
<tr><td colspan="2">Does the head of ICCD perform any operational duties for the banks or its affiliates?</td><td>18</td><td>28</td></tr>
<tr><td rowspan="3">Is there any requirement in bank's policy for the ICCD head?</td><td>Academic/Professional Degree</td><td>0</td><td>N/A</td></tr>
<tr><td>Years of banking experience</td><td>0</td><td>N/A</td></tr>
<tr><td>Areas of working experience</td><td>7</td><td>N/A</td></tr>
<tr><td colspan="2">Is there any tenure in the bank's policy for the ICCD head?</td><td>4</td><td>9</td></tr>
<tr><td colspan="2">Is there any instance of transferring ICCD head before the completion of 3 years tenure in last 5 years?</td><td>10</td><td>19</td></tr>
</table>

Source: *Survey data*

Banks are advised by BB to nominate such executive as the head of ICCD who will not stand more than two steps below the CEO at the time of appointment. However, it is depicted that 52 percent banks did not adhere to this regulation and the status is not improving either (Table 4.3). So, the expected or desired level of authority of the ICCD has not yet been established in the banking industry of Bangladesh. Deployment of higher level executives as heads of audit, monitoring and compliance is also desirable.

Table 4.3: Rank of the Chairman/Head of the committee/department/unit

<table>
<tr><th>S/N</th><th>Aspect</th><th>Position of the Head</th><th>% of Bank (2020)</th><th>% of Bank (2019)</th></tr>
<tr><td rowspan="5">1.</td><td rowspan="5">Rank of the Head of ICCD</td><td>1/2 steps immediate below CEO</td><td>48</td><td>56</td></tr>
<tr><td>3 steps immediate below CEO</td><td>28</td><td>27</td></tr>
<tr><td>4 steps immediate below CEO</td><td>17</td><td>10</td></tr>
<tr><td>5 steps immediate below CEO</td><td>3</td><td>N/A</td></tr>
<tr><td>More than 5 steps below CEO</td><td>4</td><td>N/A</td></tr>
<tr><td rowspan="4">2.</td><td rowspan="4">Rank of the Head of Internal Audit</td><td>Up to 3 steps immediate below CEO</td><td>24</td><td>35</td></tr>
<tr><td>4 steps immediate below CEO</td><td>14</td><td>10</td></tr>
<tr><td>5 steps immediate below CEO</td><td>24</td><td>28</td></tr>
<tr><td>6 steps immediate below CEO</td><td>24</td><td>N/A</td></tr>
</table>

		More than 6 steps below CEO	14	N/A
3.	Rank of the Head of Monitoring Unit	Up to 3 steps immediate below CEO	15	22
		4 steps immediate below CEO	8	15
		5 steps immediate below CEO	8	7
		6 steps immediate below CEO	39	N/A
		More than 6 steps below CEO	30	N/A
4.	Rank of the Head of Compliance Unit	Up to 3 steps immediate below CEO	25	21
		4 steps immediate below CEO	4	14
		5 steps immediate below CEO	17	31
		6 steps immediate below CEO	33	N/A
		More than 6 steps below CEO	21	N/A

Source: *Survey data*

As per direction of regulators, all banks have constituted their Audit Committee of the Board (ACB). Besides, all the Chairmen of ACBs are independent directors as required by the regulations. In addition to the Chairman, at least one more independent director should be there in the ACB, however, all banks do not have so (Table 4.4). As per recent data, 47 percent banks have ACB having five members. There is a restriction that the member of ACB and Executive Committee of the Board (ECB) would not be common, however, 7 percent banks have so.

Table 4.4: Composition of Audit Committee of Board (ACB)

S/N	Aspect		2020	2019
1.	Banks having independent director (ID) as chairman of the Audit Committee of Board (ACB)		100	100
2.	Banks (PCB's) with two or more independent director		92	N/A
3.	No. of members in ACB	3 members	32	
		4 members	21	
		5 members	47	
4.	Banks with common members of ACB and ECB		7	
5.	Banks with common members of ACB and RMC		68	

Source: *Survey data*

It is expected that the effectiveness of ICS of a bank will be assessed in a systematic way at a certain interval. As per Table 4.5, about 37 percent banks have met with the internal auditors in 2020 for getting inputs and giving directions. In 25 percent banks, no meeting was held in 2020 for reviewing effectiveness of internal control process. Generally, it is perceived that more meetings with the internal auditors should be held during pandemic, though it is virtually, for giving proper direction and guidance. Majority of the Banks have policy/system approved by BoD for direct reporting by IA to the board/ACB. Even in COVID period, banks have arranged ACB meeting in 2020. In few banks, the Head of IA and ICCD was present in all BoD meetings. More than half of the sample banks have both MANCOM and SMT where most of the members are common.

Table 4.5: Effectiveness of ICS and preparation & submission of summary audit findings (%)

S/N	Aspect		2020	2019
1.	BoD of bank met with internal auditors in 2020		37	Dimension and questions were different
2.	How many meetings were held in 2020 for reviewing effectiveness of internal control process?	0 meeting	25	
		1-2 meetings	50	
		3-4 meetings	18	
		More than 4 meetings	7	
3.	Banks having policy/system approved by BoD for direct reporting by IA to the board/ACB		82	
4.	Banks having mechanism in the hand of BoD/ACB for ensuring timely and effective correction by management as per audit report		83	
5.	Banks where ACB has taken initiative for ensuring accuracy of financial reporting of 2020		80	
6.	Banks having system of meticulously examining minutes and memos of BoD/ECB by ICCD/IA		46	
7.	Banks where ACB has discussed with external auditors regarding accuracy of financial statement of 2020		85	
8.	Banks where ACB has evaluated the performance of external auditors/ audit report and implementation thereto		82	
9.	Banks where ACB has prepared compliance report on regularization of the omission, fraud & forgeries and other irregularities detected by external/internal auditors		78	
10.	No. of meeting of ACB held in 2020	4 (as minimum requirement)	10	
		4-11	79	

S/N	Aspect		2020	2019
		12 (as maximum)	7	
		More than 12	4	
11.	Banks where ACB could ensure adequate number of skilled manpower and proper IT support for effective audit		82	
12.	Banks that referred to ACB to settle dispute between senior management and IA		4	
13.	Banks having SMT and MANCOM	Only MANCOM	26	
		Only SMT	22	
		Both MANCOM and SMT	52	

Source: *Survey data*

Deployment of adequate number of manpower is necessary for smooth functioning of ICCD. On an average, the number of employees in ICCD was 1.26 percent of total employees of the bank (Table 4.6). Average number of bank branch per employee of ICCD and IA were 5 and 8 respectively.

Table 4.6: Manpower strength of ICCD of banks in Bangladesh

S/N	Indicators		2020	2019
1.	Manpower of ICCD as percentage of total employees of bank (%)	Range	0.52-2.94	N/A
		Avg.	1.26	1.26
2.	Number of bank-branch per audit team	Range	7-80	N/A
		Avg.	25	12.94
3.	Number of bank-branch per ICCD employee	Range	2-10	N/A
		Avg.	5	12.94
4.	Number of bank-branch per Audit employee	Range	3-24	N/A
		Avg.	8	N/A

Source: *Survey data*

Audit is a specialized profession, though no specialized degree is mandatory to be an internal auditor. Nevertheless, it is expected that a suitable composition of ICCD employees with relevant academic profile will be maintained by banks. Table 4.7 shows the manpower composition of ICCD in terms of their academic profile where less than one-fifth employees have accountancy degree. The number of employees having no accounting or other business education related degrees have increased in 2020 compared to that of 2019. It is a general expectation that employees of ICCD should have relevant academic degree.

Table 4.7: Manpower composition of ICCD – Academic Profile (%)

S/N	Aspect	2020	2019
a.	Employees of ICCD having accounting professional degree	16	20
b.	Employees of ICCD having business education degree (other than a)	44	45
c.	Others (other than a and b)	40	35

Source: *Survey data*

Table 4.8 presents the status of manpower composition of ICCD based on banking experience. Most of the employees of ICCD have more than 5 years of banking experience. It is a matter of satisfaction that number of officers having less than 1-year banking experience was very few both in 2019 and 2020. Number of employees having more than 20 years of banking experiences have increased to 25 percent in 2020 as compared to that of 17 percent in 2019.

Table 4.8: Manpower composition of ICCD –categorized by banking experience (%)

S/N	Aspect	2020	2019
1	Employees of ICCD having more than 20 years of experience	25	17
2	Employees of ICCD having 15 to 20 years of experience	14	12
3	Employees of ICCD having 5 to less than 15 years of experience	44	55
4	Employees of ICCD having 1 to less than 5 years of experience	16	15
5	Employees of ICCD having less than 1 of banking experience	1	1

Source: *Survey data*

It is very encouraging that almost 80 percent employees of ICCD received training in 2019, however, 46 percent employees did not get any training in 2020 due to COVID pandemic. For enhancing human resource development, ICC provides both local and foreign training of their employees at appropriate level. Further, 67 percent banks' ICCDs have authority to arrange training program for their own employees (Table 4.9).

Table 4.9: Executives of ICCD receiving training (%)

S/N	Aspect	2020	2019
1.	Executives not receiving any training	46	20
2.	Executives getting training once in a year	31	40
3.	Executives getting training twice in a year	9	22
4.	Executives getting training more than twice in a year	14	18
5.	Executives getting foreign training	0.91	0.80
6.	ICCD having authority in arranging training program for its own employees (as % of total banks)	67	68

Source: Survey data

As per regulations, all the employees working in the branch should avail 10-days mandatory leave in each year. However, employees of other units and head offices are also practicing this. Variations have been observed among banks regarding financial benefit ranging from 0.5-1.0 basic salary for consuming each leave.(Table 4.10). Due to COVID pandemic a substantial number of employees had to stay in home in several occasions during 2020.

Table 4.10: Provision for mandatory leave in banks (% of banks)

S/N	Aspect	Option	2020	2019
1.	Banks having mandatory leave policy for the employees other than ICCD of the bank	No provision	10	13
		Once a year	87	84
		Once in two years	0	0
		Once in three years	3	3
2.	Banks having similar mandatory leave provision for the employees working in ICCD of bank		100	N/A
3.	Duration of the mandatory leave (in days)		10-15	10-15
4.	Financial benefit for mandatory leave	No benefit (% of banks)	40	N/A
		Benefit (basic salary)	0.5-1	N/A
5.	Banks opining mandatory leave provisions as equally important for executives working in any unit of the bank		96	93
6.	Employees enjoying mandatory/recreation leave fully who were eligible in the year (as perceived by ICCD)	More than 90%	25	41
		81%-90%	4	10
		71%-80%	7	5
		Below 71%	64	44

Source: *Survey data*

As per BB regulation, all employees of banks, both head office and branches, should be transferred at least once in every 3 years except CEO, Deputy Managing Director or equivalent and any one recruited for special purpose. Though most of the banks have such policy, but could not implement the same as depicted in Table 4.11. COVID pandemic has deteriorated the status a bit.

Table 4.11: Provision for job rotation in banks (% of banks)

S/N	Aspect		2020	2019
1.	Bank having job rotation policy for the employees other than ICCD of the bank		92	83.9
2.	Banks being similar job rotation policy for the employees working in ICCD of the bank		96	83.9
3.	Banks thinking job rotation provisions as equally important for executives working in any unit of the bank		78	92.9
4.	Banks able to implement the job rotation provision (as perceived by ICCD/IA)	More than 90%	11	12.9
		81%-90%	11	12.9
		71%-80%	15	19.4
		Below 71%	63	48.4

Source: *Survey data*

As per the BB guidelines, banks are required to prepare a number of operational manuals and revise the same at least annually. Table 4.12 shows that majority of the banks have updated all but operational manual, accounting manual and FOREX manual in last three years.

Table 4.12: Status of reviewing banking manual/guidelines for the last time (% of banks)

S/N	Name of Manual	Last Three Years (2018 or After)	Before 2018	No reply
1.	Credit Policy Manual	67	30	3
2.	Operational Manual	30	47	23
3.	Finance and Accounting Manual	43	30	27
4.	Treasury Manual	57	26	17
5.	HR Policy Manual	50	33	17
6.	ICC Manual	73	24	3
7.	ICT Security Policy	73	17	10
8.	FOREX Manual	47	26	27

Along with the primary target of implementing audit plan, ICCD also has some additional targets. Majority of the banks opined that they had some other targets in addition to completion of the annual audit plan (Table 4.13).

Table 4.13: Perception of ICCD regarding its target (%)

S/N	Aspect	2020	2019
1.	Does ICCD have any target other than completing audit plan?	64	54.80
2.	Does ICCD think that minimizing irregularities/mistake should be a target of it?	89	77.40
3.	Satisfaction level of ICCD to keep the extent of irregularities within tolerance level in the bank	86	79.30
4.	Does ICCD think that minimizing fraud should be a target of it?	82	74.20
5.	Satisfaction level of ICCD to keep the extent of fraud committed within tolerance level in the bank	86	78.13
6.	Does ICCD think that minimizing lapses in documentation should be a target of it?	82	74.20
7.	Satisfaction level of ICCD to keep the extent of documentation lapses within tolerance level in the bank	85	78.71
8.	Does ICCD think that ensuring proper credit appraisal should be a target of it?	85	67.70
9.	Satisfaction level of ICCD with the credit appraisal process followed by the bank	88	82.93
10.	Does ICCD think that ensuring proper credit approval should be a target of it?	82	64.50

S/N	Aspect	2020	2019
11.	Satisfaction level of ICCD with the credit approval process followed by the bank	91	86.86
12.	Does ICCD have any role in minimizing NPL?	68	80.00
13.	Satisfaction level of ICCD with the NPL position of the bank	75	61.18
14.	Does ICCD think that ensuring proper posting of executives should be a target of it?	64	67.70
15.	Satisfaction level of ICCD with the placement approach followed by the bank	83	77.50
16.	Does ICCD think that minimizing customer complaints should be a target of it?	65	64.50
17.	Satisfaction level of ICCD with the magnitude of complaints raised by customers against the bank	93	N/A

Source: *Survey data*

Operational independence of ICCD largely determines the scope, authority and performance of different units of ICCD. It is portrayed in Table 4.14 that independence of ICCD, as opined by its head, increased to 94 percent in 2020 which was 91 percent 2019. Most of the banks are satisfied with the support provided by the BoD, ACB, CEO and BB. On the contrary, ICCD could not enforce the compliance with all the recommendations made by the department.

Table 4.14: Perception of ICCD regarding its independence (% of banks)

S/N	Components		2020	2019
1.	Do you think that ICCD should be independent from management?		86	87.10
2.	Is ICCD fully independent for discharging its duties/responsibilities?		94	91.20
3.	Do you think that activities of ICCD should be controlled and evaluated by CEO?		41	35.50
4.	Is ICCD satisfied with support provided by the BoD?		97	94
5.	Is ICCD satisfied with support provided by the ACB?		97	84.10
6.	Is ICCD satisfied with support provided by the CEO/SMT?		96	92.67
7.	Is ICCD satisfied with support provided by the BB?		96	80.97
8.	Are all recommendations made by ICCD time bound for implementation?		93	80.60
9.	In how many cases ICCD can enforce the compliance with the recommendations made by ICCD?	(91-100)%	43	43.30
		(81-90)%	50	33.30
		(71-80)%	7	23.30
10.	Is there any instance in your bank that any decision of ACB was not implemented by the bank management?		7	12.90

Source: *Survey data*

There are three broad objectives of Internal Control System (ICS) as stated by BB namely operations, reporting and compliance. However, a good number of banks could not attend above 90 percent of their objectives (Table 4.15). Furthermore, among three units of ICCD, the monitoring unit is lagging behind the audit and compliance units.

Table 4.15: Achievement of objectives of internal control system

Achievement of objectives of internal control system of bank (% of banks)

% of Achievement	Operations Objective		Reporting Objective		Compliance Objective	
	2020	2019	2020	2019	2020	2019
Above 90%	50	44.80	68	75.90	50	62.10
81% - 90%	39	41.40	25	20.70	32	24.10
71% - 80%	4	13.80	7	3.40	18	13.80
Below 71%	7	0	0	0	0	0

Achievement of objectives of different units of ICCD (% of banks)

% of Achievement	Audit Unit		Monitoring Unit		Compliance Unit	
	2020	2019	2020	2019	2020	2019
Above 90%	63	63.30	40	39.30	52	43.38
81% - 90%	33	36.70	52	57.10	41	43.31
71% - 80%	0	0	4	3.60	7	13.31
Below 71%	4	0	4	0	0	0

***Source:** Survey data*

In the revised guidelines on ICC, BB instructed all scheduled banks to prepare annual report on the health of the bank. The report is required to be submitted to BB, top management and board. However, banks affected by the pandemic hardly could complete the health report within the stipulated time. It is noted that the health report contains some financial information therefore, the report is prepared after completing the annual financial statements. Sometimes, banks face problem in getting "Image & Reputation Health" score from the external auditors. Some of the audit firms do not agree with the mechanism for deriving the score. Usually, the monitoring unit of ICCD prepares the report in coordination with other units (Table 4.16). A significant number of banks have customized their health report, based on their business parameters. In fact, the issue of health report is yet to get proper attention by the bank management.

Table 4.16: Health report of the banks (% of banks)

S/N	Aspect		2020	2019
1.	Health report for the year		0*	N/A
2.	Submission of health report to BB for the year		0*	N/A
3.	Customization the format of health report by banks		43	45
4.	Bank taking any decision based on the health report		26	N/A
5.	Unit of ICCD preparing the health report	Audit	0	4
		Monitoring	96	85
		Compliance	4	11

** Questionnaire Survey was completed by March 2021. Some banks have completed the report by this time.*

Source: *Survey data*

BB has adopted all 17 principles given by the COSO for the banking industry of Bangladesh in the revised guidelines on ICC 2016. However, a good number of banks of our country could not be fully compliant with most of the principles (Table 4.17). Concerned authority and bank-management may think the matter for the improvement for smooth functioning of banks, and good governance.

Table 4.17: Perception of the Head of ICCD Regarding Compliance with the Principles of Internal Control as Mentioned ICC Guideline 2016

[1=Fully Compliant; 2=Reasonably Compliant; 3=Partially Compliant; 4=Not Compliant; and 5=No Comment]

S/N	Components and Principles of Internal Control	Compliance Status				
		1	2	3	4	5
A	**Control Environment**					
1.	The bank demonstrates a commitment to integrity and ethical values.	79	21	0	0	0
2.	The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control.	68	29	0	0	3
3.	Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in pursuit of objectives.	57	39	4	0	0
4.	The bank demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives.	36	57	7	0	0
5.	The bank holds individuals accountable for their internal control responsibilities in pursuit of objectives.	46	50	4	0	0
B	**Risk Assessment**					
6.	The bank specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.	36	57	7	0	0
7.	The bank identifies risks to the achievement of its objectives across the bank and analyzes risks as a basis for determining how the risks should be managed.	36	50	14	0	0

S/N	Components and Principles of Internal Control	Compliance Status				
		1	2	3	4	5
8.	The bank considers the potential for fraud in assessing risks to the achievement of objectives.	50	50	0	0	0
9.	The bank identifies and assesses changes that could significantly impact the system of internal control.	43	54	3	0	0
C	**Control Activities**					
10.	The bank selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.	50	46	4	0	0
11.	The bank selects and develops general control activities over technology to support the achievement of objectives.	39	54	7	0	0
12.	The bank deploys control activities through policies that establish what is expected and procedures that put policies into action.	46	54	0	0	0
D	**Information and Communication**					
13.	The bank obtains or generates and uses relevant, quality information to support the functioning of internal control.	54	43	3	0	0
14.	The bank internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.	46	50	4	0	0
15.	The bank communicates with external parties regarding matters affecting the functioning of internal control.	29	46	11	7	7
E	**Monitoring Activities**					
16.	The bank selects, develops, and performs on going and/or separate evaluations to ascertain whether the components of internal control are present and functioning.	39	57	4	0	0
17.	The bank evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the Board of Directors, as appropriate.	54	43	3	0	0

4.2 Onsite Audit and Inspection Related Activities of ICCD

Internal audit (IA) is a vital organ of ICCD for onsite verification. Table 4.18 shows that all the banks have separate audit and inspection units along with separate head of the unit. Most banks were fairly satisfied with the quantity and quality of manpower. Most banks had, on an average, 3 members in an audit team. About 60 percent banks do not feel comfort to report ACB directly without involvement of the ICCD.

Table 4.18: General information regarding audit and inspection unit of ICCD (% of banks)

Aspect		Option	2020	2019
1.	Do you have separate Audit and Inspection unit?	Yes	100	100
2.	Did you assign separate executive as head of the unit?	Yes	100	100
3.	Satisfaction level about adequate number of manpower in this unit	(91-100)%	34	16.7
		(81-90)%	34	46.7
		(71-80)%	17	26.7
		Below 70%	15	10.0
4.	Satisfaction level about the quality of manpower in this unit	(91-100)%	28	23.3
		(81-90)%	38	40.0
		(71-80)%	24	30.0
		Below 70%	10	6.7
5.	As per your opinion, who should apprise the head of this unit?	Chairman of ACB	54	N/A
		CEO/MD	4	N/A
		Head of ICCD	42	N/A
6.	Does audit unit feel comfort to report ACB directly without involvement of the Head of ICCD?	Yes	59	54.6
7.	Average number of manpower in each team		2-5	3
8.	Is there any incentive for audit team members?	Yes	17	19.4
9.	Range of daily allowance for the audit team member	Max. Tk.:	7000	8000
		Min. Tk.:	400	200
10.	Satisfaction level about delegated authority to perform duties	(91-100)%	52	43.3
		(81-90)%	45	43.3
		(71-80)%	3	6.7
		Below 70%	0	6.7
11.	Does audit team conduct surprise inspection based on findings of monitoring unit?	Yes	83	82.8
12.	Does the audit team evaluate the service quality of the branch?	Yes	100	93.5
13.	How many cases audit team has conducted an independent testing on the anti-money laundering and prevention of terrorist financing preparation of the branch?		94	
14.	How many cases audit team has received the self-assessment report on anti-money laundering and prevention of terrorist financing in due time from the branch? (within next 15 days after six-month period)		85	
15.	To what extent was it possible for audit unit to evaluate the self-assessment report thoroughly?		85	
16.	As per evaluation of audit unit, to what extent the self-assessment report		83	
17.	How many cases, audit team has conducted surprise/immediate audit/inspection if any ML/TF risk of a branch is identified through evaluation of report?		42	N/A
18.	Did audit team report the status of due and availed mandatory leave by the auditee?		78	
19.	Did audit team report the status of job rotation/transfer/posting of the branch employee?		82	
20.	How many cases, audit unit has conducted audit/inspection after the branch manager is transferred in the year?		41	
21.	Have lapses been categorized as given in BB guidelines on ICC in the year?	Yes, as per BB guidelines	68	
		Own customized policy	32	
		No categorization	0	

Source: *Survey data*

Table 4.19 summarizes the status of audit plan and its implementation status. The audit plan for a year is generally prepared by banks in the immediate preceding year. Most of the banks follow a risk based audit (RBA) approach. Due to COVID pandemic, all banks could not complete their audit plan for the year 2020.

Table 4.19: Internal audit plan of audit and inspection unit (% of banks)

S/N	Aspect of Audit Plan	Option	2020	2019
1.	Time of preparation of audit plan	In previous year	74	85.7
		In current year	26	14.3
2.	Risk-based audit plan	Yes	92	100
3.	Branch risk composition	High Risk	9	N/A
		Moderate Risk	31	N/A
		Low Risk	60	N/A
4.	Format of branch audit rating	As given by BB	48	56.7
		Customized	52	43.3
5.	Implementation status of audit plan	(91-100)%	69	82.0
		(81-90)%	17	13.0
		(71-80)%	7	5.00
		Below 70%	7	0
6.	Average time taken by the audit team to prepare an audit report (days)		10 (0-30)	10

Source: *Survey data*

Table 4.20 shows that most of the banks have prescribed format of their audit report. More than 50 percent banks have customized their format of audit report given by BB in the ICC Guidelines 2016.

Table 4.20: Audit Report on Internal Audit

Aspect	2020	2019
1. Did you devise any prescribed format of audit report?	93	N/A
2. Is the format of audit report similar to the format given in BB Guidelines on ICC 2016?	55	N/A

Source: *Survey data*

Table 4.21 shows that a significant number of banks conduct audit for most of the head office divisions/departments. Mostly audited divisions/departments of head office were Treasury, Finance & Accounts, ICT and International Division in both the years. Board Division tends to be the least audited department, although it has been increased in 2020 from 2019.

Table 4.21: Divisions/Departments of head office audited by IA (% of banks)

S/N	Name of Division	2020	2019
1.	Board Division	54	45.2
2.	Treasury	93	93.5
3.	Human Resource Division	79	77.4
4.	Risk Management Unit	57	54.8
5.	Credit Risk Management Division	82	77.4
6.	Finance and Accounting Division	89	90.3
7.	International Division	85	77.4
8.	ICT Division	89	90.3

Source: *Survey data*

Identification of risk is an important aspect of risk management framework where ICCD may contribute a lot. Table 4.22 shows that the majoiry of the banks' audit evaluated the status of core risks in both the years.

Table 4.22: Identifying core risk management status of the audited branch (% of banks)

S/N	Core Risk Area	2020	2019
1.	Credit Risk Management	81	55.2
2.	Asset-Liability Risk Management	78	55.6
3.	Foreign Exchange Risk Management	78	57.1
4.	Internal Control and Compliance Risk	77	59.3
5.	Money Laundering Risk	81	62.1
6.	Information and Communication Risk	74	60.7

Source: *Survey data*

Generally, it is perceived that there is no direct impact of IA on the financial performance of banks. However, IA may play a positive role in ensuring sustainable growth of a bank, although banks incur significant cost for performing internal audit activities. Table 4.23 shows the response of the banks on various issues relating to impact of internal audit on banks' performance. More than 90 percent banks perceived that IA system has a positive impact on bank's performance.

Table 4.23: Impact of internal audit (IA) on the performance of banks

S/N	Components		2020	2019
1.	Do you think that there is a relationship between quality of IA and bank performance?		100	N/A
2.	Do you think that a strong IA system may have some negative impact on bank performance?		14	N/A
3.	Do you think that a strong IA system may have some positive impact on bank performance?		96	93.5
4.	Do you think that it is possible to measure the impact of IA on the performance of bank		79	80.6
5.	Do you measure the impact of IA on bank-performance for a period separately?	(a) Not possible to measure record	10	14.8
		(b) Possible but never measured	55	74.1
		(c) Rarely measured	21	11.1
		(d) Regularly	14	0
6.	Do you think that it is possible to measure total cost required for conducting internal audit activities separately?		93	93.5
7.	Do you measure total cost incurred for conducting IA/overall ICCD activities for a period separately?	(a) Not possible to measure cost	7	3.7
		(b) Possible but never measured	64	77.8
		(c) Rarely measured	7	7.4
		(d) Regularly	22	11.1
8.	Do you think that sanctioning credit/investment may be reduced if there is a very strong IA system in a bank?		39	N/A
9.	Do you retain the record of rejected credit/ investment proposal due to audit objection?	(a) Not possible to maintain record	4	13.04
		(b) Possible but never retained record	56	43.5
		(c) Rarely retained record	19	21.7
		(d) Regularly	21	21.7
10.	Do you think that customers may switch over from a bank having a strong IA to a bank with lenient IA?	(a) It may happen generally	3	3.7
		(b) It may happen for customers with bad intention only	72	55.6
		(c) It may be for insignificant no. of customers	7	33.3
		(d) It may not happen	18	7.4
11.	Do you think that a strong IA system may be an obstacle for providing prompt and better customer services to the valued client?		7	32.3

Source: *Survey data*

The concept of concurrent audit is not widely practiced in banks. However, BB guidelines on ICC included a provision on concurrent audit in 2016. However, a few numbers of banks have established concurrent audit system by this time (Table 4.24). Concurrent audit is implemented in two ways – (i) physical concurrent audit system, where independent concurrent auditors are placed in the selected branches; and (ii) ICT based concurrent audit system, where auditors are assigned branches for ongoing surveillance. No bank so far went for outsourcing concurrent audit.

Table 4.24: Concurrent audit (%)

S/N	Aspect		2020	2019
1.	Banks having concurrent audit system		18	25
2.	Nature of concurrent audit	Physical	100	N/A
		ICT	0	N/A
3.	Nature of concurrent auditor	ICCD Employees	80	N/A
		Outsourced from other department	20	N/A
		Outsourced from outside bank	0	N/A
4.	Reporting line of concurrent auditor	Head of ICCD	50	97
		Head of IA	50	2
		Others	0	1

Source: *Survey data*

Now-a-days, banking operation and information system (IS) are closely related with each other. Therefore, IS audit is receiving priority by the regulatory body and top management of the banks and most of the banks have established mechanism for the same (Table 4.25). When IS audit is conducted by ICCD employees, the audit report is communicated either with the head of ICCD or IA. In addition to the IS audit, Shariah-based banks conduct Shariah audit as per ICC Guidelines 2016.

Table 4.25: Information System Audit

S/N	Aspect		2020	2019
1.	Banks having separate Information System audit under ICCD (% of banks)		96	94
2.	Nature of Information System auditor	ICCD Employees	88	60
		Outsourced from other department	8	0
		Outsourced from outside bank	0	0
		Conducted by other unit of bank	4	40
3.	Reporting line of Information System audit	Head of ICCD	50	95
		Head of IA	50	05
4.	Average number of information system auditors in a bank		3	3

Source: *Survey data*

Use of ICT facilities by the internal auditors enhances the capacity as well as their effectiveness of internal audit. It is depicted in Table 4.26 that majority of the banks are now providing laptop facility for each auditor along with internet facility. It is also expected that the rest of the banks will take initiatives for providing necessary ICT support to the executives of ICCD.

Table 4.26: ICT facilities for internal auditor

S/N	Aspect		2020	2019
1.	Banks providing laptop facilities for the auditors	For each auditor	65	N/A
		Not for each auditor but for team only	30	
		Not for auditor or team	05	

Source: *Survey data*

Automation of ICC functions may increase effectiveness and efficiency of the department and ICS as a whole. Specialized separate audit software assures paperless and green auditing which reduces the cost of manpower, paper, printing, and mailing. It is also easy to follow-up and maintain track record of the observations raised during audit. In line with this, the software creates audit database which is essential for conducting risk-based audit. Very few banks are now using such specialized software for this purpose (Table 4.27) however, most banks are optimistic about the feasibility of audit automation for the banking industry of Bangladesh. Due to pandemic, some banks have used Virtual Personal Network (VPN) for conducting IA. It is expected that other banks will move forward for developing specialized audit software in near future.

Table 4.27: IA Automation

S/N	Aspect	Positive Response (%)	
		2020	2019
1.	Did IA use any specialized separate software? (e.g., TeamMate+, ACL, IDEA, etc.)	29	19
2.	Integration of the software with core banking software	100	100
3.	Do you believe that audit automation will bring benefits for banks?	85	86
4.	Do you believe that audit automation is feasible for the banking industry of Bangladesh?	96	89

Source: *Survey data*

4.3 Off-site Surveillance by Monitoring Unit of ICCD

Monitoring unit is supportive to an effective audit mechanism and performs as watchdog of the overall control system of the bank. In 2020, all the banks have separate monitoring unit under ICCD (Table 4.28). It is also encouraging that most banks have assigned a separate executive as the head. Bank management may consider to deploy more and competent manpower in this unit.

Table 4.28: General information regarding monitoring unit of ICCD (% of banks)

S/N	Aspect		2020	2019
1.	Banks having separate Monitoring unit for off-site surveillance		100	90
2.	Banks having separate executive assigned as the head of the unit		90	81
3.	Satisfaction level about adequate number of manpower in the unit	a. (91-100)%	17	17
		b. (81-90)%	38	41
		c. (71-80)%	24	21
		d. Below 70%	21	21
4.	Satisfaction level about quality of manpower for effective off-site surveillance	a. (91-100)%	31	38
		b. (81-90)%	45	35
		c. (71-80)%	17	20
		d. Below 70%	7	7
5.	The head of Monitoring unit should be appraised by	a. Chairman of ACB	10	N/A
		b. CEO/MD	17	N/A
		c. Head of ICCD	73	N/A

Source: *Survey data*

Quarterly Operations Report (QOR) is an important tool of ICS. The status of quarterly operation report of the branch is shown in Table 4.29. Though, most of the banks get the QOR from concerned branches on time, still some banks do not get the report accordingly. ICCD evaluates the QOR to assess the strength and identify weakness of the reporting branch. Around in 87 percent cases, the banks find the QOR as accurate.

Table 4.29: Quarterly Operations Report (QOR) of the branch (% of banks)

S/N	Aspect	2020	2019
1.	How many cases banks have received copy of Quarterly Operations Report (QOR) on time (10th day of next month) from each Branch/ Centre?	88	78
2.	To what extent, it was possible for banks to evaluate the Quarterly Operations Report thoroughly?	89	83
3.	As per your evaluation, to what extent the Quarterly Operations Report show true picture?	87	80
4.	Did you prepare the Exception Report, if necessary	32	N/A

Source: *Survey data*

For making the monitoring unit as watchdog, most of the banks think that it is possible to develop a customized dashboard (Table 4.30). However, most of the banks do not have online surveillance system covering all branches under monitoring unit. Some banks have a plan of software-based evaluation system for reviewing QOR, LDCL, DCFCL. It is argued that a strong online surveillance system may be complementary to audit which may reduce the time for conducting physical audit of the branches.

Table 4.30: Determinants of the Effectiveness of Monitoring Unit

S/N	Aspect	Options	2020	2019
1.	Is it possible to develop a Customized Dashboard for close and timely monitoring by the different layers of bank	a. Yes	96	Dimensions and question were different
		b. No	4	
2.	Do you have any online surveillance system covering all branches under monitoring unit?	a. Yes	21	
		b. No	48	
		c. No but have a plan	31	
3.	Do you think that an audit system should be supported by a strong monitoring unit?	a. Yes	100	
		b. No	0	
4.	Do you think that an online surveillance system covering all branches is less costly and more effective than frequently physical audit of the branches?	a. Yes	76	
		b. No	24	
5.	Do you have a software-based evaluation system for reviewing QOR, LDCL, DCFCL?	a. Yes	0	
		b. No	62	
		c. No but have a plan	38	
6.	Do you think that an online surveillance system covering all branches under monitoring unit may be complementary to the concurrent audit?	a. Yes	80	
		b. No	20	

Source: *Survey data*

4.4 Follow-up and Reporting Activities by Compliance Unit of ICCD

The compliance unit under ICCD is mainly responsible to follow-up and report the compliance status of audit observation, both internal and external. After getting observations from auditors, the unit regularly interacts with the concerned auditee and compiles the compliance status. As per guidelines of BB, all the banks have established compliance unit under ICCD (Table 4.31). Like other units of ICCD, banks management may think to deploy competent and sufficient number of human resources in this unit.

Table 4.31: General information regarding compliance unit of ICCD (% of banks)

S/N	Aspect		2020	2019
1.	Banks having separate Compliance unit		100	100
2.	Banks having separate executive assigned as the head of the unit		72	93
3.	Satisfaction level about adequate number of manpower in this unit	(91-100)%	17	23
		(81-90)%	52	43
		(71-80)%	17	23
		Below 70%	14	11
4.	Satisfaction level about quality of manpower for effective follow-up of compliance	(91-100)%	28	30
		(81-90)%	52	47
		(71-80)%	10	13
		Below 70%	10	10
5.	ICCD of bank reports the compliance status of new internal/external regulatory issue/circular		96	N/A
6.	Banks having online system for checking compliance with audit recommendations by concerned unit		42	N/A
7.	The head of Compliance unit should be appraised by	a. Chairman of ACB	10	N/A
		b. CEO/MD	7	N/A
		c. Head of ICCD	83	N/A

Source: *Survey data*

It is portrayed in Table 4.32 most banks store and keep tracks of all regulations and circulars in ICCD. Besides, ICCD takes responsibility for distributing all regulations and circulars to related units of banks.

Table 4.32: Compilation and dissemination of directives and regulations (% of banks)

S/N	Aspect	2020	2019
1.	Banks maintaining all regulations and circulars in ICCD	79	76
2.	Banks distributing all regulations and circulars to related units by ICCD	71	79

Source: *Survey data*

4.5 COVID Pandemic and Other Aspects of ICCD

According to the FGD participants, most banks did not conduct onsite audit during COVID-19 pandemic up to June 2020. However, some banks have resumed physical audit in the subsequent period. Almost all banks stated that ICT based monitoring was conducted during this period. After resuming internal audit, they did not observe any significant/high-level irregularities for the COVID period. Those banks, using specialized audit software, got competitive advantages for conducting follow-up activity. Most of the audit executives faced a great challenge for completing the annual audit plan, because of the abnormal situation. It is expressed that some banks have formed special committee to look into the impact of COVID or resolve the COVID related problems in 2020.

To cope-up with the pandemic, some banks have introduced few new approaches, e.g. (i) self-audit system; (ii) distance audit; (iii) transaction-based audit; (iv) guest audit; (v) use of virtual personal network (VPN); and (vi) reduction of audit period. With some limitations, however, these approaches were proven supportive for handling the abnormal situation. Besides, some of these approaches may be continued in the new-normal situation after required modification thereto. Moreover, a bank is trying to find out a way where audit observations will be generated automatically by using artificial intelligence. All of the respondents are in favor of changing the existing IA system.

5. Issues and Recommendations

Generally, a review paper identifies some issues based on findings in each year. Along with the newly identified problems, the issues highlighted in the previous reports which are still relevant and have not been implemented so far are discussed below.

5.1 CAMELS Rating

CAMELS is a supervisory rating which accommodates most of the crucial aspects of a bank including internal control and compliance system. It is observed that the rating rather than improving deteriorated further in 2020. It creates discomfort to see the absence of any bank having rated '1' (Strong) by the supervisory rating in the last few years. As there are a large number of banks with different ownership structure, vision and mission, strategies, and business portfolios, significant variation in the length of business experience among the banks working in competitive environment, one can reasonably expect that few banks, at least, will demonstrate good governance, proper risk management, a robust and sound internal control culture, and a smooth long-term growth. So, rather than taking for granted, we should strive for further uplifting the financial performance and condition of the banks by examining the relatively weak areas in our banks so as to get better CAMELS rating.

5.2 Proper Governance Structure

Internal control system includes all excludes none irrespective of standing of the employees or nature of the activities. Establishing a sound internal control environment is the primary responsibility of the board and top management. Any weakness at any part of the control environment damages the internal control culture. It is true that a bank can always find some rooms for improving ICS and rectify most of the errors through the revisions of the internal control policies and procedures. But the misappropriation of bank's fund by the key persons may produce a large and irreparable loss which cannot be prevented by lower level management including

ICCD. We find such type of mishaps committed by the influential person in several banks of our country and there was no system to prevent them. So, the establishment of a proper governance structure, which is the foundation for all other components of IC, will not be possible unless the BoD and SMT demonstrate a commitment to integrity and ethical values.

5.3 ICT-based IA

This is the era of digitalization of business activities where the most of the banking operations are being conducted through ICT. Furthermore, COVID-19 pandemic has increased the importance of ICT for conducting day-to-day activities. Banks have taken the advantages of ICT for completing IA during the pandemic. Besides, bankers opined to continue ICT-based IA in the new-normal environment. Nonetheless, there is no way to negate the importance of physical verification considering the imperfect substitutability between off-site and on-site monitoring (physical audit). Obviously, off-site surveillance using ICT increases the coverage of audit and reduces the time lag between occurrence and detection of deviation. So, banks need to strike a right balance in adopting and implementing the ICT-based IA and conventional surveillance system for making internal audit more effective.

5.4 Head of ICCD

Position-authority-responsibility and performance of the employees are interdependent. As per the existing guidelines, the head of ICCD should not be an executive who is more than two septs below the CEO. The ICCD should be led by such high-ranked executive for taking sensitive decision prudently and promptly, handling irregularities strictly, identifying loophole in the system, and designing appropriate mechanism for internal control. However, we see a deviation in a good number of banks in appointing the Head of ICCD with required hierarchy level that is reducing the authority and work space for the ICCD.

5.5 Internal Audit Approach

Philosophy of internal audit and its approach have changed over the years. Instead of fault finding of the business people, evaluating the existing system, process and risk management architecture, and providing consultancy services to the operational units to add value to the entity are getting priority for the internal auditors in advanced business environment. Policing over the business people should not be the main aspects of IA. As per the opinions of the auditees, there is a gap between expected and actual behavior of the auditors in some cases. Constituting audit team with the employees having high degree of professionalism with relevant qualification and expertise will bring desired result in audit operation.

5.6 Concurrent Audit

In case of conventional audit system, there is a time lag between the occurrence of an event and its time of auditing. Some adverse incidents demand immediate attention at an early stage to prevent further loss from happening. The concurrent audit system exactly does that by helping the management to detect a problem/loss at the beginning phase of that event. Bangladesh Bank's guidelines recognized the importance of concurrent audit system for the banking industry. Other than a few banks, the system is not still practiced in the industry. The banks, at minimum, may think of introducing concurrent audit either physically or virtually for the high-level-risk branches.

5.7 Systematic Appraisal of ICCD Activities

A business unit of a bank is generally appraised based on profitability and asset quality. As per regulation, every bank has a separate ICCD at the head office. Effectiveness and efficiency of ICS of the operational units is evaluated by the ICCD. However; there is no objective and systematic approach for the appraisal of ICCD though ACB is entrusted with the responsibility to evaluate the department. However, an objective appraisal system may assist the board and the management to take necessary steps for the improvement of the department.

5.8 Manpower Planning for ICCD

The quality of ICCD activities depend on the knowledge, skill of the executives relating to the banking operations, systems, and processes. Deployment of experienced officers and executives from those who have proven track record of serving banks for a certain period with integrity and honesty certainly is a suitable approach. Besides, regular job rotation policy for the operational executives may not be equally suitable for ICCD. In fact, the key persons having proven competence along with benefits of learning by doing will be best rewarding for the bank if such persons are posted in ICCD for a long tenure. In line with the same reasoning, some employees with specialized knowledge may be posted permanently in this department.

5.9 Effectiveness of Health Report

Preparation and dissemination of health report to the top management, board and Bangladesh Bank is a regulatory requirement. The report, quite distinct from other disclosures, provides significant and concise information relating to financial health, ICC, and reputation of the bank. But the study finds a wide gap between its potential and actual impact in the areas of policy formulation and development of new strategy by the bank. The extent of familiarity with the health report by the employees including those working in ICCD has been found low. So, the top management should be more active to get the most out of valuable information available in the health report.

It is noted that others issues raised in the previous papers (Appendix III) are also pertinent for the current year. A customized dashboard for real time monitoring; demonstrating a commitment to integrity and ethical values by the BoD and SMT; maintaining database on cost and impact of ICCD; customization of policy by the individual banks without violating the spirit of BB regulations; and taking punitive actions against wrongdoer are notable in this regard. For smooth functioning of banks and ensuring sustaining development of the industry, regulators and concerned authorities may consider the above observations.

References

Aksoy, T., and Abdullai, M. (2020). "Assessing bank's internal control effectiveness: The case of Ghanaian listed banks". *International Journal of Research in Business and Social Science,* Vol. 9, No. 4.

Alves, C., and Mendes, V. (2004). "Corporate Governance Policy and Company Performance: The Portuguese case", *Corporate Governance: An International Review,* Vol. 12, pp. 290-301, accessed from http://dx.doi.org/10.1111/j.1467-8683.2004.00370.x.

Bangladesh Bank (BB) (2017). "Self-Assessment of Internal Control System to Prevent fraud-forgeries in the Banks," DOS Circular Letter No. 10, dated 09-05-2017.

Bangladesh Bank (BB). (2002). "Constitution of the Audit Committee of Board of Directors", BRPD Circular No. 12, dated December 23, 2002.

Bangladesh Bank (BB). (2010). *Guidelines on Risk Based Capital Adequacy*, Dhaka, December.

Bangladesh Bank (BB). (2013). "Constitution of Board of Directors of Banks and their Responsibilities", BRPD Circular No. BRPD 11, 27 October, 2013

Bangladesh Bank (BB). (2014). DOS Circular Letter No. 02, dated March 04, 2015.

Bangladesh Bank (BB). (2015). BFIU Circular Letter No. 01, dated January 08, 2015 and BFIU Circular Letter No. 03, dated April 9, 2015.

Bangladesh Bank (BB). (2015b). BRPD Circular Letter No. 04, dated February 25, 2015, and BRPD Circular Letter No. 06, dated April 22, 2015

Bangladesh Bank (BB). (2015c). SD Circular No. 01, dated April 13, 2015.

Bangladesh Bank (BB). (2015d). FEPD'S Letter dated November 15, 2015

Bangladesh Bank (BB). (2016), *Internal Control and Compliance Framework for Internal Control Systems in Banking Organizations*, Dhaka, Bangladesh.

Bangladesh Bank (BB). (2016b), BRPD Circular No. 6/2016, Dated September 04, 2016.

Bangladesh Bank (BB). (2018). *Risk Management Guidelines for Banks,* Department of Off-Site Supervision of BB, Dhaka.

Bangladesh Securities and Exchange Commission (BSEC). (2006), Notification No. SEC/CMRRCD/2006-158/Admin/02-08, dated February 20, 2006.

Bangladesh Securities and Exchange Commission (BSEC). (2018), Notification No. BSEC/CMRRCD/2006-158/207/Admin/80, Dated June 03, 2018, Dhaka.

Bank for International Settlements (BIS). (2012). *The Internal Audit Function in Banks*, June, Switzerland.

Bank for International Settlements (BIS).(1998). *Framework for Internal Control Systems in Banking Organizations*, September, Switzerland.

Bank for International Settlements (BIS).(2014). *Review of the Principles for the Sound Management of Operational Risk*, October, Switzerland.

Bank for International Settlements (BIS).(2015). *Corporate governance principles for banks*, July, Switzerland.

Bhagat, S., Jefferis, R.H. (2002). *The Economics of Corporate Governance Studies*. Cambridge, MA:MIT. available at http://dx.doi.org/10.3926/ic.703

Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control – Integrated Framework,* available at www.coso.org,

Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2017). *Enterprise Risk Management – Integrating with Strategy and Performance*, available at www.coso.org,

Fernandez-Rodriguez, E, Gomez-Anson, S. and Cuervo-Garcia, A. (2004). "The Stock Market Reaction to the Introduction of Best Practices Codes by Spanish Firms". *Corporate Governance: An International Review*, Vol. 12, pp. 29-46, http://dx.doi.org/10.1111/j.14678683.2004.00341.x.

Fomburn, C.; Shanley, M. (1990). "What's in a Name? Reputation Building and Corporate Strategy". *Academy of Management Journal*, Vol. 33, pp. 233-258. http://dx.doi.org/10.2307/256324.

Goncharov, I., Werner, J.R. and Zimmermann, J. (2006). "Does compliance with the German corporate governance code have an impact on stock valuation?: An empirical analysis". *Corporate Governance: An International Review*, Vol. 14, No. 5, pp. 432-445, accessed from http://doi.org/10.1111/j.14678683.2006.00516.x.

Hart, O. (1995). Corporate governance: Some theory and implications. The Economic Journal, 105(430): 678-689. http://dx.doi.org/10.2307/2235027 http://aaoifi.com/?lang=en, website of AAOIFI, accessed on September 2, 2021.

IFAC. (2012). "Final Pronouncement: Evaluating and Improving Internal Control in Organizations", available at http://www.ifac.org/sites/default/files/publications/files.

Institute of Chartered Accountants in England & Wales. (1999).*Internal control: Guidance for Directors on the Combined Code*, available on http://www.ecgi.org/codes/documents/turnbul.pdf.

Institute of Internal Auditors. (IIA). (2008). "Sarbanes–Oxley Section 404: A Guide for Management by Internal Controls Practitioners," 2nd ed. Online at: www.theiia.org/download.cfm?file=31866

Institute of Internal Auditors. (IIA). (2016). *International Standards for the Professional Practice of Internal Auditing (Standards,)*, October, available at https://global.theiia.org/standards-guidance/mandatory-guidance/Pages/Standards.aspx.

Jin, J.Y., Kanagaretnam, K., Lobo, G.J. and Mathieu, R. (2013). "Impact of FDICIA internal controls on bank risk taking". *Journal of Banking and Finance*, Vol. 37, No. 2, pp. 614-624, accessed from http://doi.org/10.1016/j.jbankfin.2012.09.013.

Maijoor, S. (2000). "The Internal Control Explosion". *International Journal of Auditing*, Vol. 4, pp. 101-109, accessed from https://doi.org/10.1111/1099-1123.00305.

Mcnulty, J.E. and Akhigbe, A. (2016). "What do a bank's legal expenses reveal about its internal controls and operational risk?" *Journal of Financial Stability*, available at http://dx.doi.org/10.1016/j.jfs.2016.10.001.

Nandom,I.Y., A.M. Mubarik., N. Alhassan., Adam., Jamaldeen.,Sumaila and R.Muujeeb (2017). *The Effectiveness of Internal Control System in Safeguarding Assets in the Ghanaian Banking Industry.* MPRA. https://mpra.ub.uni-muenchen.de/95116/

Rittenberg, L.; Schwieger, B. (2001). Auditing Concepts for a Changing Environment. FL: Harcourt College Publishers.

Siddique, M.M., Hossain, M.M., Khatun, M. and Islam, M.R. (2019). "Review of Internal Control and Compliance of Banks – 2018", *Banking Review Series 2019*, Paper 4, BIBM, Dhaka.

Siddique, M.M., Ullah, M.S., Hossain, M.M., Islam, S.N., and Talukder, A.K. (2015). "Review of Internal Control and Compliance of Banks – 2014", *Banking Review Series 2015*, Paper 4, BIBM, Dhaka.

Udoayang, J. O. &Ewa, U. E. (2012). The impact of internal control design on banks‟ ability to investigate staff fraud, and life style and fraud detection in Nigeria. International Journal of Research in Economics & Social Sciences. 2(2), 32-43.

www.bb.org.bd, website of BB, accessed on September 2, 2021.

www.bis.org, website of BIS, accessed on September 2, 2021.

www.coso.org, website of COSO, accessed on September 2, 2021.

www.ifsb.org, website of IFSB, accessed on September 2, 2021.

www.researchgate.net/publication/258258914

www.researchgate.net/publication/280902171

Appendix-I

List of Responded Banks

S/N	Banks Responded in 2019	S/n	Banks Responded in 2020
1.	Sonali Bank Limited	1.	Sonali Bank Limited
2.	Janata Bank Limited		
3.	Pubali Bank Limited	2.	Pubali Bank Limited
4.	Uttara Bank Limited	3.	Uttara Bank Limited
5.	Bangladesh Krishi Bank	4.	Bangladesh Krishi Bank
6.	Bangladesh Development Bank Limited	5.	Bangladesh Development Bank Limited
7.	National Bank Limited	6.	National Bank Limited
8.	Eastern Bank Limited	7.	Eastern Bank Limited
9.	Islami Bank Bangladesh Limited		
10.	Dutch-Bangla Bank Limited	8.	Dutch-Bangla Bank Limited
11.	Mercantile Bank Limited	9.	Mercantile Bank Limited
12.	ONE Bank Limited		
13.	Al-Arafah Islami Bank Limited	10.	Al-Arafah Islami Bank Limited
14.	National Credit and Commerce Bank Limited	11.	National Credit and Commerce Bank Limited
15.	Trust Bank Limited	12.	Trust Bank Limited
16.	Southeast Bank Limited	13.	Southeast Bank Limited
17.	Social Islami Bank Limited	14.	Social Islami Bank Limited
18.	Export Import Bank of Bangladesh Limited	15.	Export Import Bank of Bangladesh Limited
19.	Mutual Trust Bank Limited	16.	Mutual Trust Bank Limited
20.	BASIC Bank Limited		
21.	Jamuna Bank Limited	17.	Jamuna Bank Limited
22.	Bank Asia Limited	18.	Bank Asia Limited
23.	First Security Islami Bank Limited	19.	First Security Islami Bank Limited
24.	Prime Bank Limited		
25.	Dhaka Bank Limited	20.	Dhaka Bank Limited
26.	Investment Corporation of Bangladesh		
27.	BRAC Bank Limited	21.	BRAC Bank Limited
28.	Shahjalal Islami Bank Limited		
29.	NRB Commercial Bank Limited	22.	NRB Commercial Bank Limited
30.	Union Bank Limited	23.	Union Bank Limited
31.	NRB Bank Limited		
		24.	Agrani Bank Limited
		25.	Repali Bank Limited
		26.	United Commercial Bank Limited
		27.	IFIC Bank Limited

		28.	AB Bank Limited
		29.	The Premier Bank Limited
		30.	The City Bank Limited
		31.	Global Islami Bank Ltd.
		32.	South Bangla Agriculture and Commerce Bank Limited

Appendix-II

List of FGD Participants

S/N	Name of Banks Participated in 2019	No. of Participants	S/n	Name of Banks Participated in 2020	No. of Participants
1.	AB Bank Limited	3	1.	Sonali Bank Limited	4
2.	Agrani Bank Limited	4	2.	Pubali Bank Limited	2
3.	Bangladesh Commerce Bank Ltd.	5	3.	Mutual Trust Bank Limited	2
4.	Bangladesh Development Bank Limited	4	4.	Dhaka Bank Limited	3
5.	BRAC Bank Limited	4	5.	Al-Arafah Islami Bank Limited	2
6.	Commercial Bank of Ceylon PLC	1	6.	Bangladesh Development Bank Limited	4
7.	Dhaka Bank Limited	4	7.	Islami Bank Bangladesh Limited	7
8.	Dutch-Bangla Bank Limited	3	8.	Eastern Bank Limited	2
9.	Export Import Bank of Bangladesh Limited	3	9.	Padma Bank Limited	2
10.	Islami Bank Bangladesh Limited	4	10.	The Premier Bank Limited	2
11.	Janata Bank Limited	3	11.	Prime Bank Limited	2
12.	National Credit and Commerce Bank Limited	2	12.	NRB Commercial Bank Limited	2
13.	Prime Bank Limited	4	13.	Janata Bank Ltd.	4

14.	Social Islami Bank Limited.	1	14.	Bangladesh Krishi Bank	3
15.	Sonali Bank Ltd.	4	15.	Dutch-Bangla Bank Limited	4
16.	Southeast Bank Limited	3	16.	Social Islami Bank Limited	1
17.	The Hongkong and Shanghai Banking Corporation Limited	4	17.	First Security Islami Bank Limited	5
18.	The City Bank Limited	4	18.	Meghna Bank Limited	6
19.	Union Bank Limited	4	19.	Woori Bank	3
20.	United Commercial Bank Limited	4			
	Total	**68**		**Total**	**60**

Appendix-III

Observations and Issues Raised in Previous ICC Review Paper of BIBM

S/N	Recommendation
1.	Bank may think about strengthening off-site surveillance using ICT.
2.	Bank should establish a system for proper appraisal of ICCD Activities.
3.	For getting desired result, banks should have a detailed manpower planning.
4.	Bank management may think to use ICC Health Report for decision making.
5.	Ensuring effective internal control environment is a must by demonstrating a commitment to integrity and ethical values by the BoD and SMT.
6.	Status of supervisory rating (CAMELS and ICC) is not an encouraging one for whole industry.
7.	Higher ranked executive should be posted as the head of ICCD (Not more than two steps below to the CEO as a regulatory requirement).
8.	Banks should maintain database on cost and impact of IA/ICCD.
9.	Customization of policy by the individual banks without violating the spirit of BB regulations is desirable.
10.	Bank may think about audit automation by using specialized software.
11.	Independent observations of external auditors on ICS and IA would not become effective.
12.	Integration of different units of ICCD (audit, monitoring & compliance) is essential for smooth functioning.
13.	Revision and clarification of ICC Guidelines by BB for minimizing inconsistency is essential.
14.	There is a lack of corporate culture and it is essential to ensure *de jure* and *de facto* freedom of the top management.
15.	Punitive actions should be taken against wrongdoer.

Paper Three

IT OPERATIONS OF BANKS

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List of Abbreviation

ACS	Access Control System
ACHS	Automated Clearing House System
ADC	Alternate Delivery Channel
AI	Artificial Intelligence
AMC	Annual Maintenance Contract
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
API	Application Programming Interface
APT	Advanced Persistent Threat
ATM	Automated Teller Machine
ATMS	Automated Transaction Monitoring System
ATPT	Advanced Threat Protection Team
BACPS	Bangladesh Automated Cheque Processing System
BB	Bangladesh Bank
BCP	Business Continuity Plan
BEFTN	Bangladesh Electronic Funds Transfer Network
BFIU	Bangladesh Financial Intelligence Unit
BFSI	Banking, Financial Services and Insurance
BI	Business Intelligence
BIBM	Bangladesh Institute of Bank Management
BTRC	Bangladesh Telecommunication Regulatory Commission
CBS	Core Banking System
CDCDP	Certified Data Centre Design Professional
CDM	Cash Deposit Machine
CERT	Computer Emergency Response Team
CIB	Central Information Bureau
CIO	Chief Information Officer
CISO	Chief Information Security Officer
CITO	Chief Information Technology Officer
COBIT	Control Objectives for Information and Related Technology
CRM	Cash Recycler Machine
CTO	*Chief Technology Officer*
DC	Data Center
DMS	Document Management System
DNS	*Domain Name System*
DoS	Denial of Service
DDoS	Distributed Denial of Service
DRP	Disaster Recovery Plan
DRS	Disaster Recovery Site
EDI	electronic data interchange
EFT	Electronic Fund Transfer
e-KYC	Electronic Know Your Customer

EMV	Europay, MasterCard, Visa
FCB	Foreign Commercial Bank
FDC	Far Data Center
FGD	Focused Group Discussion
IAM	Identity and Access Management
IaaS	Infrastructure as a Service
IB	Internet Banking
IBCC	**Indian Banking Community Cloud**
IBFT	Internet Banking Fund Transfer
ICT	Information and Communication Technology
IDRBT	Institute for Development and Research in Banking Technology
IP	Internet Protocol
ISAC	Information Sharing and Analysis Center
ISO	International Organization for Standardization
ISOC	Information Security Operations Center
IT	Information Technology
ITD	Information Technology Department
ITDRMIT	Disaster Recovery Management
IVR	Interactive Voice Response
KVM Switch	Keyboard, Video, Mouse
MFA	Multi Factor Authentication
MFS	Mobile Financial Service
MIS	Management Information Systems
MNO	Mobile Network Operator
NBFI	Non-Bank Financial Institution
NDA	Non-disclosure Agreement
NDC	Near Data Center
NGFW	Next-generation Firewall
NPSB	National Payment Switch Bangladesh
NIST	National Institute of Standards and Technology
OPGSP	Online Payment gateway Service Provider
OS	Operating System
OTC	Over the Counter
PAM	Privileged Access Management
PaaS	Platform as a Service
PCB	Private Commercial Bank
PCI DSS	Payment Card Industry Data Security Standard
POS	Point of Sale
RBI	Reserve Bank of India
PSD	Payment System Department
RTGS	Real Time Gross Settlement
SaaS	Software as a Service

SB	Specialized Bank
SDN	Software Defined Networking
SIEM	Security Information and Event Management
SOC	Security Operations Center
SOCB	State-owned Commercial Bank
SOP	Standard Operating Procedure
SLA	Service Level Agreement
SSL	Secure Sockets Layer
TMS	Transaction Monitoring Systems
VPN	Virtual Private Network
WAN	Wide Area Network
WFH	Work from Home
UPS	Uninterruptible Power Supply
USSD	Unstructured Supplementary Service Data
2FA	Two-Factor Authentication

IT Operations of Banks

1. Background of the Study

The IT revolution has ushered in a global surge in financial activity that has never been seen before. The cost of global funds transfer has been significantly reduced thanks to technological advancements and the development of global networks. Information technology enables banks to meet the high expectations of customers who are more demanding and technologically savvy than their predecessors. Instant, anytime and anywhere banking facilities are the demand of new generation customers. In today's Bangladesh, information and communication technology (ICT) has become the lifeblood of the banking sector. The banking industry is the backbone of any healthy economy. ICT is aiding and abetting the banking industry in improving the efficiency and effectiveness of services provided to customers, as well as enhancing business processes, managerial decision-making, and work-group collaborations, all of which help banks maintain their competitive landscape in fast changing and growing markets.

Technology is and will remain fundamental to the future of banking. It provides banks with multiple and constantly emerging channels to communicate with customers and analyze their behaviors allowing smoother, more convenient and accessible channels for customers to use whilst capturing more data to continually improve on this offering. This technology also means an improvement in banks internal systems and processes, resulting in making a more efficient and ultimately more profitable bank. Banking and Information technology have become inextricably linked, and the rise of FinTech firms means that all banks can benefit from new, cutting-edge technology, and only those that do will be successful in the new banking domain.

Most of the banks in Bangladesh have made significant investments in ICT platform and develop multiple distribution channels to provide customers with online financial services. In general, banks have succeeded in developing cutting-edge product features, lowering operating costs, improving customer service, and reducing inherent risks.

A large ATM and POST networks have been developed for providing 24/7 access to finance for customers. They offer the services to its customers like electronic payment services through virtual cash and e-cards, ATM/POS, Mobile Banking, Internet and Apps Banking etc. Many banks have installed POS terminals in major shops, hotels, sales centers etc. all over the country. Some of the technology-driven banks are providing internet banking channel with the inclusion of a number of customer-friendly features. The customers are now able to do banking from any place of Bangladesh at any time.

The bank management are now thinking seriously to reduce administrative/operating cost for profit maximization through some initiatives/measures like optimum utilizations of IT/IS resources, reducing cash/paper-based transactions, enhancing virtual cash and digital payment, online internal communications among the employees and others stakeholders of banks through Intranet and Extranet platform. With a view to increase cashless transactions, banks are now introducing innovative digital services like Mobile Apps, QR-code payment, Digital Wallet etc.

Many financial products and services rely on ICT, so banks must think how to utilize IT resources efficiently and introduce innovative digital financial technology to lessen the cost; improvement of the efficiency and productivity of employees; ensuring secured, reliable and speedy internal IT operations; and also how to provide better services to the modern tech-savvy customers. Otherwise, banks may face serious IT risks as well as business risks in the present competitive and digital age.

Against this backdrop, it might be useful to review the overall activities of ICT division of banks for the year 2020 to detect the changes and development of e-banking services and operations in recent times and compare with the previous years. The review study was done basically to capture and evaluate the scale of expanded use of ICT in banking business, and to identify the gaps and associated problems in technology driven banking business.

1.1 Objectives of the Study

The broad objective of the study is to review the overall IT based products, services and activities for the year 2020. The specific objectives of the review paper are to

a. Discuss the IT based products and services in the banking sector of Bangladesh;
b. Analyze the activities of IT departments of banks in 2020;
c. Examine the comparative status of IT operations of banks for last few years; and
d. Detect the challenges and recommend future courses of actions for better and secured IT operations of banks.

1.2 Methodology and Data

Both primary and secondary data were collected to accomplish the objectives of the study. Secondary data were collected from various research articles, banks website, publications of Bangladesh bank, and BIBM. A total of 30 banks (Appendix-1) responded to the questionnaire survey of the study. The survey questionnaire was sent to the IT departments of 60 banks in Bangladesh, and we received information from 30 banks. Table-1 shows the category of banks.

Table-1: Category of Banks

Category of Banks	No. of Banks
State-Owned Commercial Banks (SOCBs)	4
Specialized Banks (SDBs)	2
Private Commercial Banks (PCBs)	22
Foreign Commercial Banks (FCBs)	2
Total	**30**

1.3 Organization of the Review Report

The paper is organized into six sections. After an introductory section with objectives and methodology, Section-2 discusses the IT based products and online services in banking sector. Section-3 reviews and analyses the activities of IT departments of banks in 2020 and its comparison with previous years. Section-4 identified some challenges of IT operations in banks and role of BB to overcome these challenges. Section-5 shows the implementation status of the recommendations provided by the review research paper of previous year (2020) for better IT operations in banks; section-6 puts forward concluding remarks and some recommendations.

2. IT Based Products and Typical Activities Performed by IT Divisions of Banks

Customers' demand is changing rapidly, and banks are struggling to meet the changing demand. Most banks in Bangladesh try to adopt new technology, so that they can serve the customer at their level best. The ever-changing landscape of banking technology has been affected by many ultra-delicate and therefore disruptive technologies like Artificial Intelligence, Big Data Analytics, Blockchain, Internet of Things, etc. Maintaining legacy system and coping with the new technologies, banks' IT departments faced several challenges. However, the IT department tactfully handled all the challenges and continuously innovated new products and services to serve the customers. Also, if we want to fulfill regulatory compliance and want to provide better and secure services towards customers we can deploy IT in various effective ways.

2.1 IT Infrastructure Setup by Banks

Data Centre (DC) and Disaster Recovery Site (DRS)

Data Center (DC) is essential in centralized online banking system, that stores and delivers valuable and confidential information of a bank to help the business running. Most of the banks in Bangladesh have hi-tech data center, high speed multiprotocol labeling and switching network, clustered servers, virtualized server environments, precision cooling systems, and central UPS supported by standby generators. According to the 'Guideline on ICT Security for Banks and Non-Bank Financial Institutions' published by Bangladesh Bank in 2015, "The bank or NBFI shall establish a Disaster Recovery Site (DRS) which is geographically separated from the primary site (minimum of 10 kilometers radial distance but choice of different seismic zone will be preferred) to enable the restoration of critical systems and resumption of business operations when a disruption occurs at the primary site".

Communications

If telecommunications infrastructure is unstable, data transfer and coverage of branch network will be hampered. All primary telecommunications links that transfer crucial data between different branches and the Data Center are enhanced by assuring dual connectivity to increase capabilities and service levels while reducing network interruption.

2.2 Different Systems being used by Banks to improve Efficiency

Automated Clearing House System (ACHS): BB published operating rules and procedures on Bangladesh Automated Cheque Processing System (BACPS) through the PSD circular no. 07, dated December 05, 2019. For clearing and settlement activities, all scheduled banks that participate in the Bangladesh Automated Clearing House (BACH) must adhere to the BACPS Operating Rules and Procedures Ver 2.0.

Electronic Fund Transfer (EFT): The Bangladesh Electronic Funds Transfer Network (BEFTN) operates as a processing and delivery focal point that helps the dispersal and clearance of electronic credit and debit instruments between all partaking banks. All banks of Bangladesh are active members of BEFTN. The process is extremely proficient. Also, it reduces cost for debiting some accounts in one bank and crediting several accounts in multiple banks, for example, cash dividend transfers of companies to their stakeholders dispersed across the country having accounts with several banks, salary transfers of oversized companies with offices in different locations across the country, and transfer of insurance premium from a client account to the insurance companies' account.

Real Time Gross Settlement (RTGS): As part of its inclusive digitalization initiative, Bangladesh Bank launched the Real Time Gross Settlement (RTGS) system on October 29, 2015, to simplify safe, secure, and well-organized interbank payment systems. It ushered in a new era in the country's large-value time-critical disbursement and clearance. It was carried out with the financial support from the Asian Development Bank and technical assistance from the World Bank. CMA Small Systems AB, a Swedish concern, created the central RTGS system.

RTGS is an electronic settlement structure that allows funds to be transferred from one bank's account to another's account in real time and on a gross basis. Real-time refers to transactions that do not require any sort of delay. Transactions are finalized as soon as they are completed. The system is intended to settle high-value local currency transactions (greater than or equal to 100,000 BDT) as well as domestic foreign currency transactions. It is worth noting that this system currently connects more than 7000 online branches (as on December 2019) of 55 scheduled banks out of a total of 11000 bank branches of 57 banks in the country. The system currently handles local currency only, but domestic foreign currency transactions are anticipated to be launched shortly. (https://www.bb.org.bd/fnansys/paymentsys/rtgs.php).

Online CIB: Banks can increase the speed of information handling by utilizing online CIB. In addition, the time it takes to obtain a customer's CIB information has been significantly reduced. Banks were among the active members who provided necessary borrower data in response to the BB CIB Online Project since its beginning in 2011. Many banks have computerized the process of obtaining borrower information centrally, bypassing the legacy system for retrieving and accumulating CIB information from branches.

The Core Banking Solution (CBS): A standard and adaptable CBS contributes significantly to a bank's competency to respond rapidly to diverse business, including compliance with changing guidelines. For standardizing the CBS functionalities, BB published a Guidelines on Core Banking Solution (CBS) Features and Controls in November 2016. It contains 1137 controls, which help a bank to understand the requirements for a standard CBS.

ATM, POST, CDM and CRM Network: In Bangladesh, the banks established a vast ATM, POST, CDM, and CRM network to serve customers' needs. Customers can not only withdraw but can deposit money by using CRM. Although very few banks are dominating in this market. BB took a remarkable initiative by introducing NPSB, which helps fourth generation banks to enjoy the ADC services. Through PSD circular

5/2020, dated May 31, 2020, BB has published a guideline for White Label ATM and Merchant Acquiring Services. According to the circular, non-bank entities interested in installing, owning, and functioning interoperable White Label ATMs and merchant acquiring services in Bangladesh can do so now easily. Furthermore, they can extend the scope of banking and retail payment services at a low cost throughout Bangladesh, particularly in rural areas.

Electronic Know Your Customer (e-KYC): Through BFIU Circular No. 25 dated on January 8, 2020, Bangladesh Financial Intelligence Unit (BFIU) circulated a comprehensive guideline on Electronic Know Your Customer (e-KYC). In addition, the government has established a broad strategic goal (Strategy No. 08) to stimulate FinTech and RegTech, as well as financial inclusion and cyber security. The guideline's strategic action item no. 9 has set a deadline of December 2020 for implementing e-KYC/Digital KYC. The e-KYC is applicable for all banks, insurance companies, financial institutions, stock dealer and broker, portfolio manager and merchant banker, security custodian and asset management firms.

Internet Banking (IB): The demand of tech-savvy customers is to do banking from anywhere and anytime. To meet up the demand, many banks have already introduced Internet banking facilities. At present 45 banks are providing IB facilities to their customers (BB, 2020). Customers can access their accounts via mobile devices such as smartphones and tablets using the system software.

Mobile Financial Services (MFS): Through the PSD Circular No: 04/2018 dated on July 30, 2018 BB published "Bangladesh Mobile Financial Services (MFS) Regulations 2018". The regulations support affordable access to formal financial services, particularly for Bangladesh's poor and unbanked populations. MFS, as per the guideline, denotes to E-money services provided to a client having a specific mobile/cell phone number (labeled as mobile account), with the record of funds stored on the electronic general ledger tagged with a particular bank. These facilities can be obtained by delivering particular payment directions from the carrier's mobile phone or by using an alternate digital procedure or device that guarantees the transaction's legitimacy. Unlike e-money products, however, 'cash-in' and 'cash-out' as well as other facilities allowed by BB at agent places are permitted for MFS accounts.

Agent Banking: According to the Prudential Guidelines published by Bangladesh Bank for Agent Banking Operation in Bangladesh-2017, agent banking is a form of delivering limited-scale banking facilities to the marginalized population via committed agents under a legitimate agency agreement, instead of a teller/cashier. Bangladesh Bank launched the agent banking service to make banking services easier for the country's unbanked citizens. This service, like mobile banking, greatly speeds up the progression of financial inclusion. The advancement of agent banking in Bangladesh is aided by information technology.

Chatbot and Call Centre: 'EBL DIA' (Eastern Bank Limited Digital Interactive Agent) is country's first Artificial Intelligence (AI) centered banking Chatbot, in which anyone can communicate with EBL by having a chat with an AI-powered Chat Robot on a social media network. However, to prioritize customer satisfaction and easy access to banking services, some banks in Bangladesh have set up high-tech contact centers. Customers can obtain various details from any phone system via IVR, which is interconnected with the CBS and card systems, as well as they are able to discuss with contact center agents (Phone bankers).

Corporate Intranet System: For banks, paper-based correspondence is a huge challenge. Many banks have developed an innovative structure that has a significant effect on paper-free communication within the bank in order to minimize the use of paper and develop a green IT environment. Circulars, messaging, news, instant notices, employee profiles, on-line leave processing, on-line requisition, on-line cheque requisition, MIS reports from CBS data, and many other features are available through an internal or in-house web portal. Other software includes reconciliation system, payroll system, employee tax management system, foreign exchange return software, and cash transaction reporting system, among others. Some banks use in-house developers to develop such system while many banks depend on vendors for the solutions.

Business Intelligence Software: In banks, the use of various electronic and computer systems is growing. There is no wonder that there is an information explosion in such banks as a result of incurring more information electronically. Banks intend to implement wide range of Business Intelligence Software in order to derive the necessary information. Following the implementation of such systems, top bank executives will have access to comprehensive MIS. Data warehouse and data mining tools are already available on the market for implementing the aforementioned system in our banks.

Document Management System: Banks typically use a paper-based filing system and keep files in file cabinets in the office. This system is inefficient because it takes up valuable office space. Some banks' use of Document Management Systems (DMS) has resulted in a revolution in document capture, archiving, and sharing. When a document enters the bank's site, it is acquired in the system and tied to the application where it is needed. Documents generated within banks will also go through the same procedure. To locate the correct file, a search engine is used. Documents in this procedure can be organized in a variety of ways for monitoring purposes. The physical document will then be shifted to a less expensive document library. The BB audit team could encourage this groundbreaking system by changing its audit procedure, which demands documents in hard copy format, and allowing the option of keeping them in electronic format. This system has had a profound effect on implementing paperless communication within the bank.

Cross Border Operations: Banks have set up systems to support remittance transactions by foreign exchange houses. The system is web-based and can transfer funds in real time from the overseas from one bank account to another via the BEFTN network or some other mechanism involving non-banking institutions/telephone companies, etc.

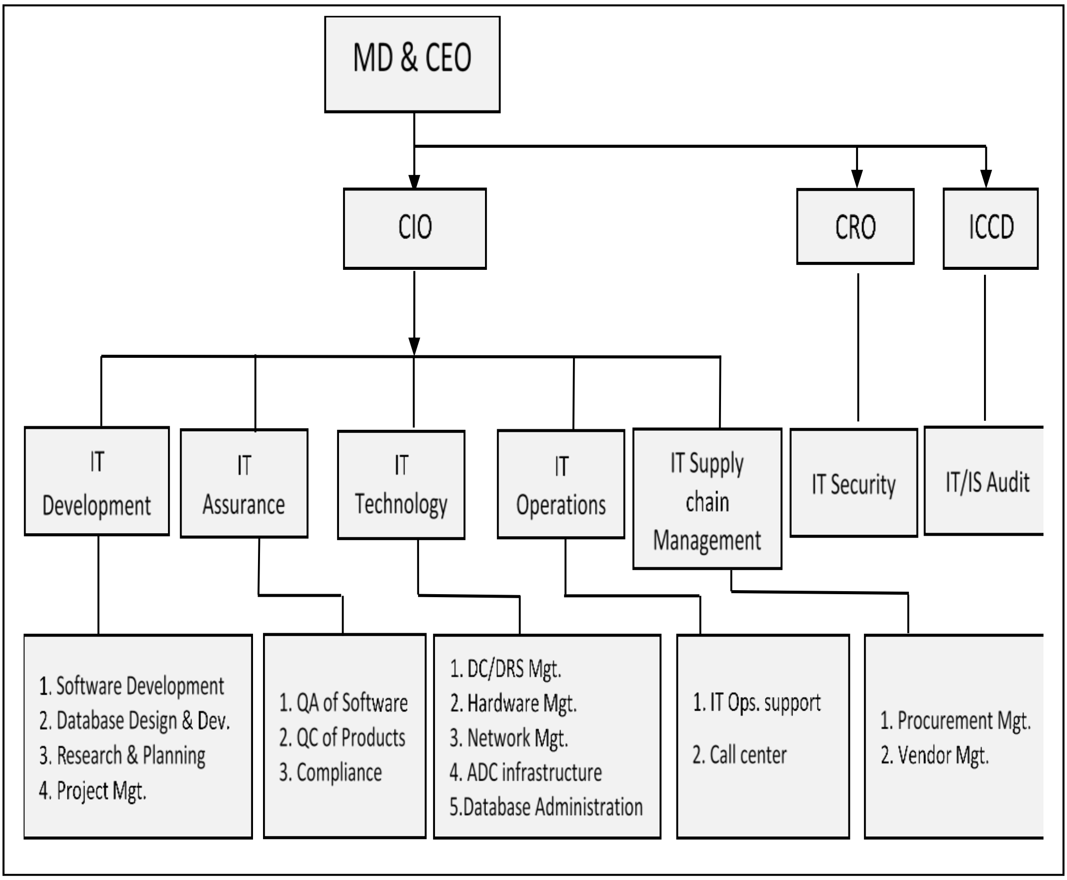
2.3 Activities Commonly Performed by the IT Department in Banks

Activities of any bank's ICT division have been grouped into various functional units to ensure smooth execution of responsibilities - Hardware Maintenance Unit, Network and Communication, IT Security Management, Database Management System, Software Development, DC/DR Operation, IT Help Desk, IT Audit, Delivery Channel Management, CBS Management, System Administration and Storage management.

2.4 Organogram of Information Technology in Banks

An effective IT organizational structure plays an important role in improving the efficiency, reliability and security of e-banking services. The figure-1 shows an organizational structure for the IT department of a bank.

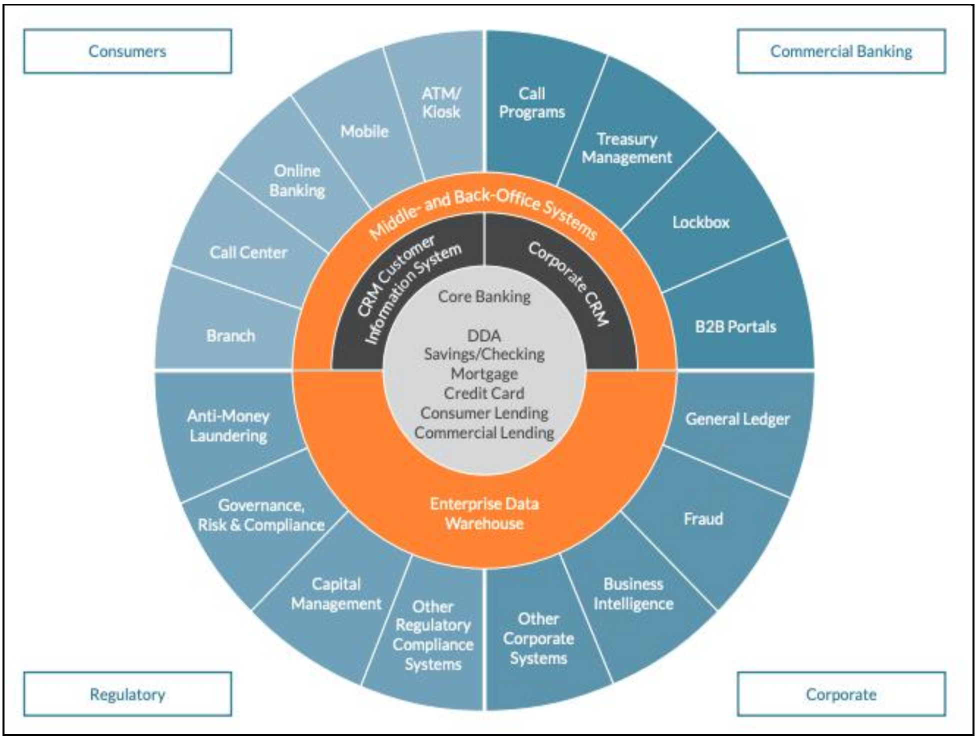
Figure-1: Proposed Organizational Structure of the IT Department of Bank



Source: Authors' Survey

2.5 Simplified Model for Banking Infrastructure

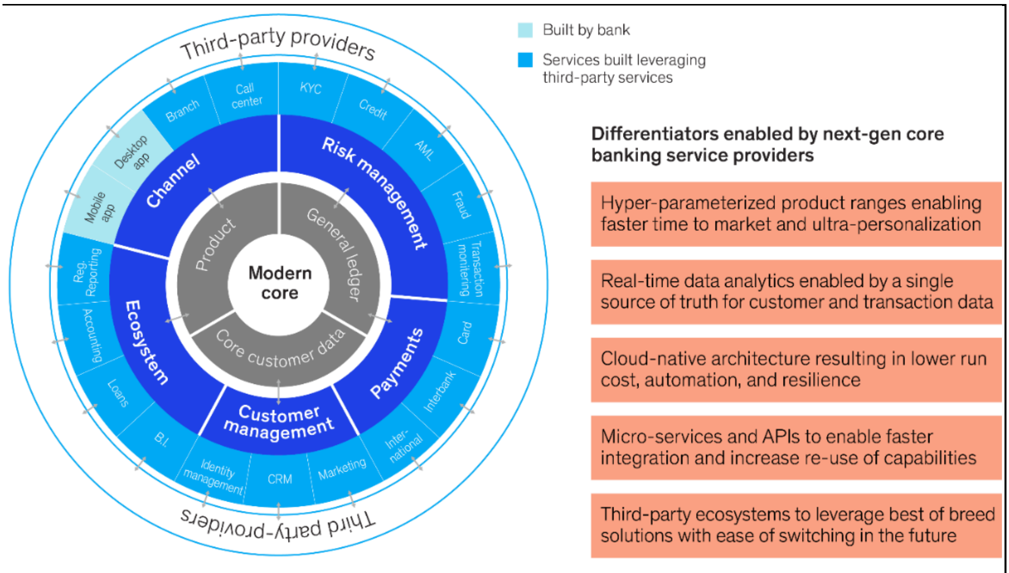
Figure-2: Simplified Model for Banking Infrastructure



Source: White paper on Modernizing Legacy Systems at Financial Institutions, Protiviti Ltd, June 2019

2.6 Bank Anatomy Based on a Next-generation Core Banking Platform

Figure-3: Bank Anatomy Based on a Next-generation Core Banking Platform



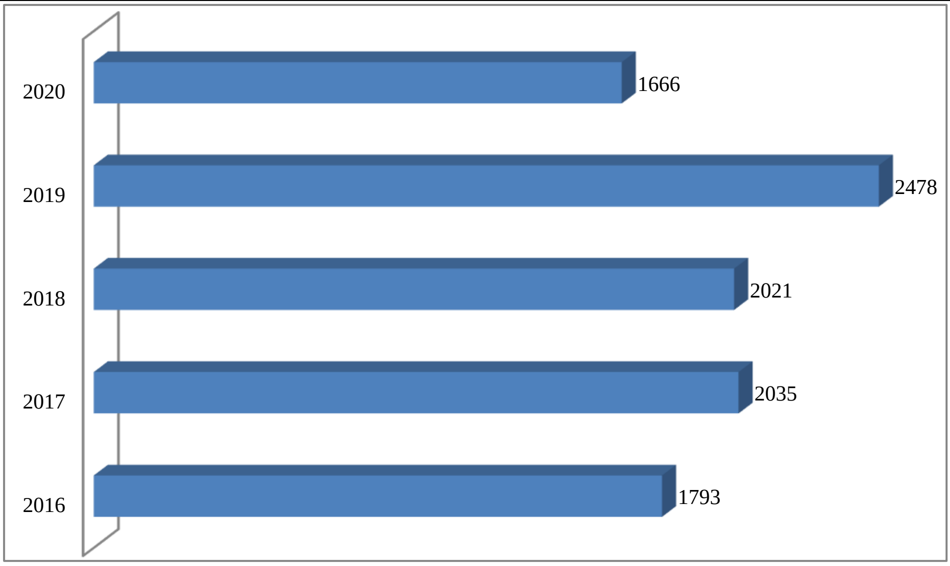
Source: White Paper on Digital and Analytics, McKinsey & Company, August 2019 (www.mckinsey.com)

3.0 Data Analysis and Findings

3.1 IT Investment and Sector-wise IT Budget

In 2020, around Tk. 1,666 crore was invested for the development of Information System in the banking sector (Figure-4). It is seen from the survey that IT investment in 2020 is 32.77 percent less compared to 2019. One of the reasons for less investment in this year might be the adverse impact of the COVID-19 pandemic on local and global business, especially the banking business. Figure-4 also shows year wise IT investment of the banking sector in Bangladesh. It is mentionable that in 1968, Agrani Bank installed the first computer in the banking sector of Bangladesh. However, the total IT investment up to 2020 was estimated at Tk 42,609 crore since 1968.

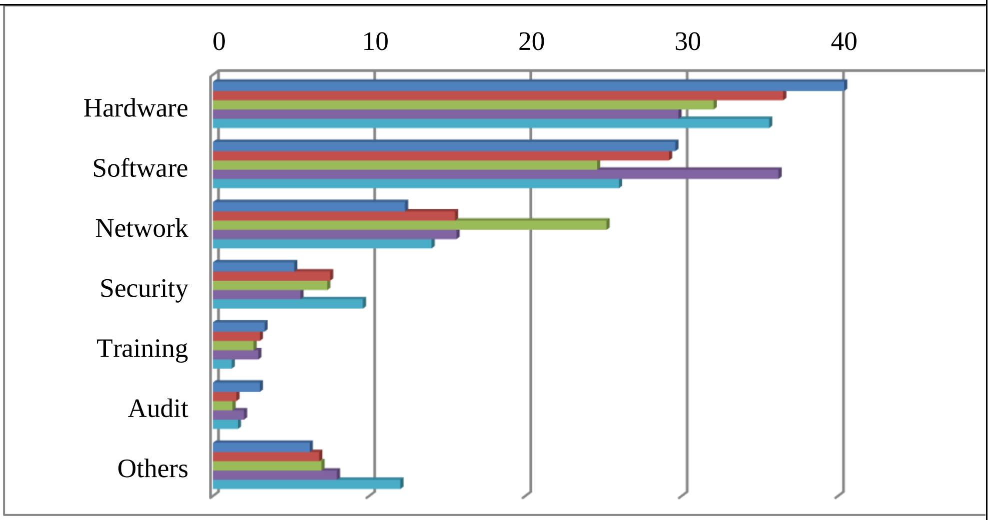
Figure-4: IT Investment in Banks from 2016-2020 (Crore BDT)



Source: Survey Information, 2021

In 2020, banks allocated 35.6 percent of its total IT budget for the procurement of hardware components. The amount has slightly increased compared to previous year (29.8%). Investment in Network decreased a bit (14%) in 2020 compared to 15.6% in 2019. It is seen that budget for IT Security, Training and Audit is not adequate, though it is slightly increased for IT Security and decreased for Training and Audit in 2020 compared to the previous year. To ensure better IT security banks should focus on security, audit and training. In this year about 26% of IT expenditure was related to Software procurement and update. The rest of the budget went to power management, vehicles purchase, stationary procurement and maintenance of IT equipment (Figure-5).

Figure-5: Distribution of IT Budget from 2016 to 2020 (% of Total Budget)



Source: Survey Information, 2021

3.2 Size of the IT Department

In 2020, the IT departments of all Bangladeshi banks employed approximately 5,875 people. According to IT heads of surveyed banks, the total number of employees in the IT department was insufficient, putting them under a lot of pressure. The average, minimum and maximum number of employees of IT departments (considering all banks) were 94, 9, and 294, respectively in 2020. On the other hand, the minimum number of IT employee was 35 in Bangladeshi banks (excluding FCBs).

Table-2(a): Ratios of IT and Non-IT Employees in Banking Sector

	2016		2017		2018		2019		2020	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SOCB	1:88	1:190	1 : 43	1 : 119	1 : 41	1 : 116	1 : 31	1 : 96	1:29	1:92
SDB	1 : 88	1 : 190	1 : 168	1 : 276	1 : 151	1 : 269	1 : 142	1 : 228	1:139	1:223
PCB	1 : 29	1 : 501	1 : 16	1 : 94	1 : 14	1 : 91	1 : 20	1 : 81	1:13	1:80
FCB	1 : 20	1 : 79	1 : 15	1 : 49	1 : 14	1 : 45	1 : 15	1 : 47	1:15	1:46

Table-2(b): Ratios of IT Employees and Computerized Branches in Banking Sector

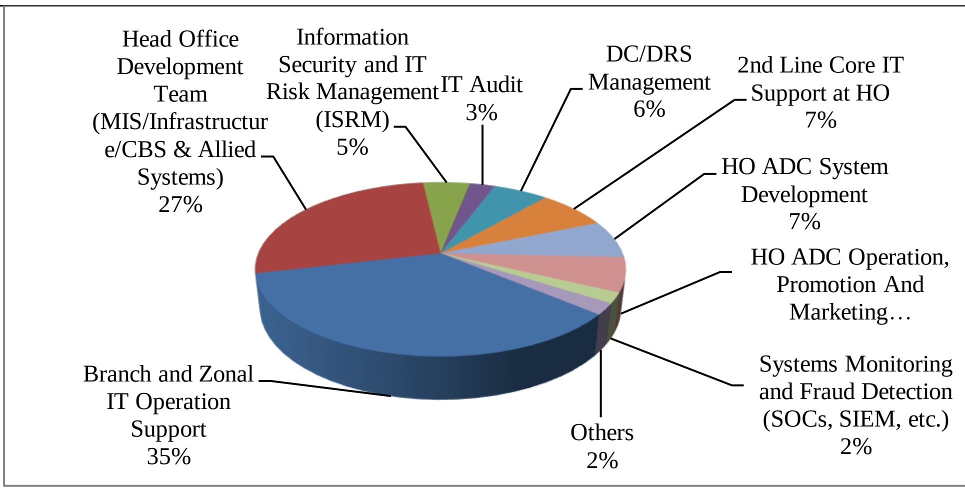
	2016		2017		2018		2019		2020	
	Min	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
SOCB	1:5	1:12	1 : 2	1 : 9	1 : 2	1 : 8	1 : 1.99	1 : 8	1 : 1.92	1 : 7.75
SDB	1 : 5	1 : 12	1 : 18	1 : 29	1 : 18	1 : 29	1 : 17	1 : 28	1 : 16	1 : 26
PCB	1: 15	1 : 48	1 : 0.9	1 : 5	1 : 0.8	1 : 4.5	1 : 0.9	1 : 4.5	1 : 0.88	1 : 4.3
FCB	1 : 0.7	1 : 3.0	1 : 0.5	1 : 2.3	1 : 0.49	1 : 2.2	1 : 0.52	1 : 2.3	1 : 0.49	1 : 2.27

Source: Survey Information, 2021

Table 2(a) shows the ratios of IT and Non-IT employees in the banking sector and Table 2(b) shows the ratios of IT Employees and computerized branches in the banking sector.

Distribution of IT Employees in different sub-divisions is shown in Figure-6. It is seen that the highest number of IT employees are working in the IT Operations Department (35%), followed by Head Office IT Development Team (27%).

Figure-6: Distribution of IT Employees in 2020 (% of Total IT employees)

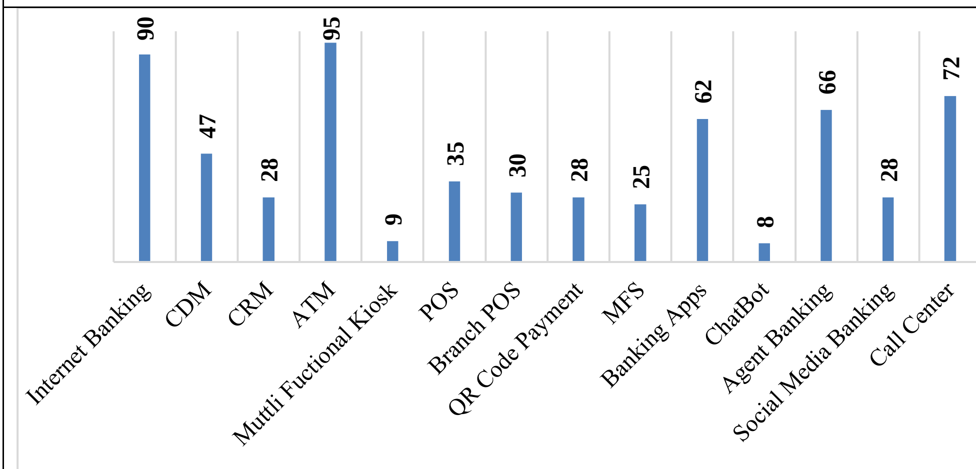


Source: Survey Information, 2021

3.3 Alternative Delivery Channels (ADCs) in Banks

Bangladeshi banks have already established several ADCs to serve their customers 24 hours a day and 365 days a year. ATM service is very popular among customers as 95% banks offer this service. Internet banking, call center and agent banking are other popular ADCs. Also Banking Apps has a prominent future, as 62% banks have promoted this service for their customers (Figure-7); however, we are not habituated with some channels such as chat bot and multi-functional kiosk that are already popular in developed countries. Chat bots are being used by major banks worldwide, that allow banks to handle many customers simultaneously, and social media is a valuable tool for banks to generate brand awareness, leads, sales, and revenue. But, very few banks in our country actually used these two channels.

Figure-7: ADCs Used by Banks to Provide Online Services to Customers (% of Banks)



Source: Survey Information, 2021

3.4 Mobile Banking

In Bangladesh, two types of mobile banking service are available. USSD is a menu-based facility that operates in real-time as an open session between the application and the end user. The USSD code is accessible from any phone, whereas the app is only accessible from a smartphone with an active data bundle. Since the commencement of MFS, the flow of cash into Bangladesh's rural areas has amplified significantly. Since 2015, there has been a significant year-on-year increase in the number of customers, volume of transactions, and number of transactions. (Table-3).

Table-3: Growth of Mobile Banking from 2015 to 2020

	2015	2016	2017	2018	2019	2020
No. of Approved Banks	28	19	19	19	19	19
No. of Banks Offering MFS	18	17	18	18	16	15
No. of Agents	561,189	710,026	786,459	886,473	971,620	1,058,897
No. of Customers	31,845,658	41,078,524	58,825,414	67,519,645	79,555,079	99,336,198
No. of Active Customers	13,218,356	15,874,325	21,065,321	37,323,000	34,646,000	32,327,000
No. of Total Transaction (Millions)	1,166.05	1,473.24	1,875.64	2,272.75	2,589.8	3,172.0
Total Transaction Amount (Billions BDT)	1,772.76	2,346.92	3,146.62	3,788.85	4,343.18	5,616.0

Source: Bangladesh Bank [Economic Trends (https://www.bb.org.bd/pub/publictn.php), Financial Stability Report

In our country, 74% banks (providing MFS) have introduced mobile banking App. Among them, 23% banks have developed it with joint collaboration of local vendor, 44% have developed the app in-house, whereas local vendors have developed the app for remaining 33% banks.

The key challenges that banks face in providing mobile banking services are summed up in Box-1.

Box-1: Problems and Challenges in Mobile Banking

1. Increasing customer awareness has become a difficult task. Despite repeated warnings from banks, a large number of customers (especially garments female workers) continue to share their PIN, resulting in deceitful transactions.
2. Telco should provide customer's details so that banks can cross match their KYC.
3. Agent points are experiencing a liquidity crisis. Because there are risks of carrying cash to make sure adequate liquidity at various agent points (particularly in rural regions).
4. Inadequate number of mobile banking offices across the country to provide timely customer facilities such as KYC processing, dispute resolution, and so on.
5. An appropriate agent selection and monitoring mechanism.
6. The distributor and agent commission is extremely high.
7. MNOs' limitation to provide USSD connections. Telco fees are exorbitant. Another issue is that MNOs have different fee structures for using the USSD gateway. To address this issue, an app-based MFS can be created.
8. OTC transaction is a common practice in mobile banking transaction.
9. Level playing field is not ensured for MFS providers.
10. Establishing distribution channel is costly.
11. There is no plan in place to verify two major photo IDs, namely passport and driver's license.
12. The cost of marketing and promotion is high.
13. It is a significant challenge to prevent money laundering and terrorist financing.
14. Service charge for cash out is very high.
15. Transaction limit is low.

Source: Survey Information, 2021

3.5 Digital Wallet

A digital wallet (or e-wallet) is a software-based system that safely holds private data from users, such as payment information and passwords for various payment methods and websites. Users can simply and rapidly complete purchases using near-field communications technology by using a digital wallet. Mobile payment systems, which permit consumers to pay for buying with their smartphones, can be used in conjunction with digital wallets. In Bangladesh, only 49% banks have started digital wallet services for their customers. The status of Mobile App and Digital Wallet based e-banking Services in 2019 and 2020 is shown in Table-4.

Table-4: Mobile App and Digital Wallet based e-banking Services (% of Banks)

Type of Mobile Apps and Digital Wallet	2019	2020
Proprietary Wallet	29%	42%
Open Wallet	10%	10%
QR-Code Payment	10%	20%
Bangla QR-Code Payment	9%	9%

Source: Survey Information, 2021

3.6 SMS Banking

About 95% banks in our country offer SMS banking for their customers. Among them, 38% use 'Push Service' and 71% use 'Push-Pull Service'. The purposes of using SMS banking by the banks are stated in Table-5.

Table-5: Purposes of SMS Banking by Banks (% of Banks)

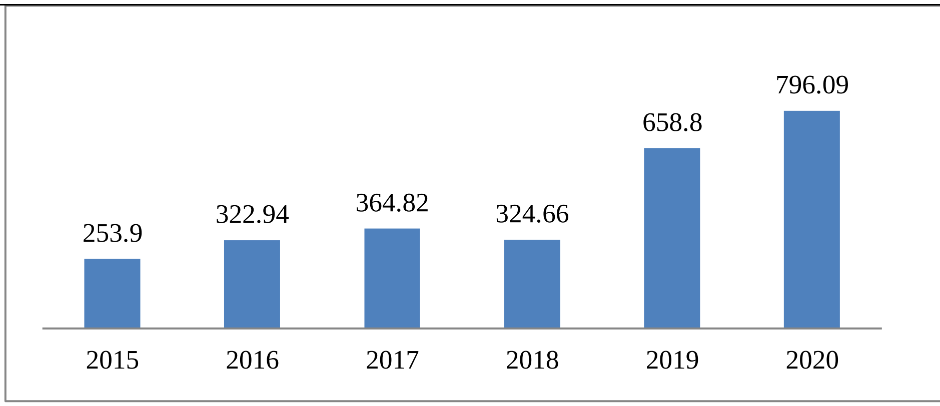
Purposes	2019	2020
Transaction Notification	95%	95%
OTP	80%	82%
Marketing	70%	71%
Regulatory Compliance (for ex. half-yearly account statement sent to BB)	55%	58%
Others	5%	5%

Source: Survey Information, 2021

3.7 Internet Banking

90 percent of banks provided some sort of informational and transactional Internet Banking services at the end of 2020. However, only 52 percent banks provided such services in 2015. In our banking sector, there has been a satisfactory improvement in terms of providing Internet Banking services. In 2020, the number of customers and transactions were 32,45,333 (3.25 million) and 2,44,30,983, respectively, which were 27,42,241 (2.74 million) and 1,98,97,516, correspondingly, in the previous year. From 2015 to 2020, the amount of money transferred through this channel increased significantly. Since 2019, a significant growth in volume of transactions compared to the previous years is observed.

Figure-8: Volume of Internet Banking Transaction (Billion BDT) from 2015 to 2020



Source: Financial Stability Report (2015-2018), Economic Trend, (February 2019, 2020), BB

Table-6 shows a list of services provided by the banks through internet banking facilities.

Table-6: Internet Banking Facilities (% of Banks)

Sl. No.	Internet Banking Facilities	2016	2017	2018	2019	2020
1	Transferring Fund (A/C to A/C transfer for same Customer)	57	60	78	78	80
2	3rd Party Fund Transfer (One customer's A/C to another customer's A/C for the same banks)	50	55	66	78	80
3	Fund Transfer of Interbank (One customer's A/C to another customer's A/C in different bank)	30	45	48	52	62
4	Payment for Utility bill (Electricity, WASA, Gas, etc.)	32	40	51	58	62
5	Bill payment for Credit card services	35	40	57	61	62
6	Transfer fund from credit card account to his own A/C	3	5	5	12	14
7	Transfer fund from Bank A/C to his mobile banking A/C	15	16	25	42	56
8	Transaction history of all accounts of the same customer	67	70	81	81	82
9	Transaction history of all loan accounts of the same customer	65	67	76	76	76
10	To see the information of Credit card by the customer	10	10	13	15	18
11	Mobile Top Up or iRecharge	45	50	65	68	70
12	To see the Mobile banking information of the same customer	0	0	5	5	8

Source: Survey Information, 2021

Bangladeshi banks offer several internet banking services for corporate customers. Types of corporate banking services that are provided through internet banking are listed in Table-7. Through Internet Banking, clients can check his/her loan limit (66% banks) and can pay utility bills (53% banks). Also, 64% banks transferred the salary of their employees using this channel. Banks should take a more proactive approach to providing adequate corporate services via this channel.

Table-7: Corporate Level I-Banking Services (% of Banks)

Sl. No.	Corporate I-Banking Services	2019	2020
1	The customer can observe or view Loan Limits and Limits Utilization	66	66
2	Initiating of LC application by the Customer	13	15
3	Facility for the Paying of Employee Salary	62	64
4	Utility Bills	50	53
5	Fund Transfer with multilevel authorization	4	4
6	SWIFT Integration	0	0
7	Payments of Invoice	0	0
8	Initiating of the Bank Guarantee by the Customer	8	8

Source: Survey Information, 2021

All banks use BEFTN, 85 percent use NPSB, and 90 percent use RTGS for Inter-Bank Fund Transfer (IBFT) via Internet banking. Around 56% banks have agreement with MFS providers to transfer fund from customers' own account to MFS account. But only 23% banks are satisfied with the cooperation of MFS providers.

Major challenges met by banks regarding I-Banking are summarized in Box-2.

Box-2: Problems and Challenges related to I-Banking in BD

1. Bank Customers share their security credentials to their friends or relatives.
2. Lack of Awareness by the Branch employees about internet roaming service.
3. To combat with different cyber-attacks – DDoS, SQL injections, MITMA, Phishing, etc.
4. Shortage of Financial budget for purchasing security tools and applications and Vendor Dependency related to CBS customizations.
5. Customers are becoming dissatisfied due to delaying of receiving OTP (as 2FA) through mobile SMS
6. Customization of application software to add new features.
7. Present fund transfer ceiling is a barrier for corporate customers.
8. The major concerned issues or challenges for I-Banking transactional services are Cyber-attack and customer awareness about the cyber threats like phishing attack, IP tracing etc.
9. Customers become locked with their User ID as they forget their password often. Customer cannot easily reset their password due to lacking of their technical knowledge.
10. Vulnerability or Weakness in Application-level security.
11. Interruption in Web server connectivity due to network link-down.

Source: Survey Information, 2021

3.8 POST

POST (Point of Sale Terminal) allows making transactions, using all types of debit and credit cards. The growth of POST in Bangladesh is shown in Table-8.

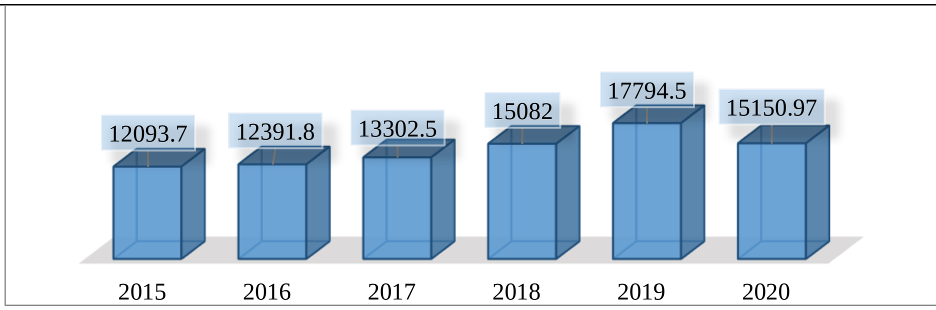
Table-8: Number of POST

	2015	2016	2017	2018	2019	2020
POS	30336	32953	37379	45896	58527	73229

Source: Economic Trend, (Feb 2021), BB

Most POSTs (91.6%) are being operated in urban areas. In Dhaka city, 86% POSTs are in operation. In Bangladesh only PCBs provide this service. In 2020, total number of POS transactions was recorded at 2.8 crore which was 3.1 crore in previous year (2019). Volume of POST transactions from 2015 to 2020 is shown in Figure-9.

Figure-9: Volume of Transactions in POST from 2015 to 2020 (Crore BDT)



Source: Economic Trend, (July 2021), BB

About 30% banks provide branch POS facility. There are approximately 2326 Branch POS in total.

3.9 ATM

An automated teller machine (ATM) enables banks' customers to perform transactions, like cash withdrawal, deposit, funds transfer, or inquiries about account information, at any time and without the need for direct communication with bank employee. The growth of ATM in Bangladesh is shown in Table-9.

Table-9: Number of ATM

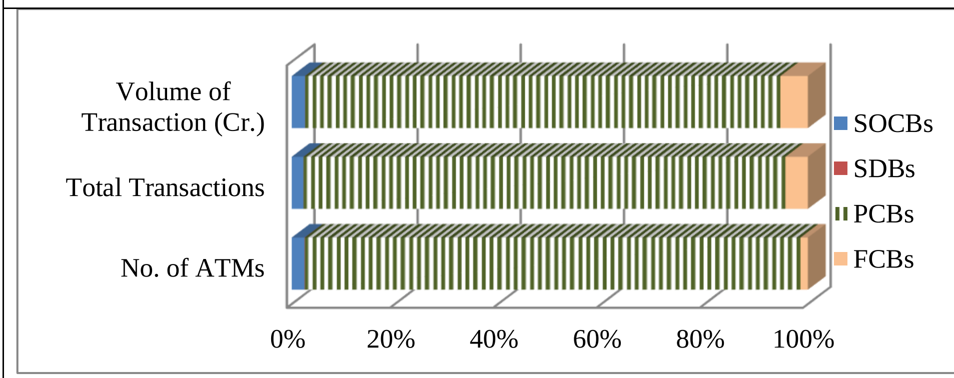
	2015	2016	2017	2018	2019	2020
ATM	7839	9019	9522	10355	10924	11923

Source: e-Banking and e-Commerce Statistics Unit, (July 2021), BB

According to BB, in December, 2020 SOCBs have only 288 ATMs, whereas PCBs have 11,473 ATMs. In fact, PCBs own more than 96 percent of total ATMs in Bangladesh. Dutch-Bangla Bank Limited owns 46.9 percent of total ATMs in Bangladesh. Central Bank emphasized on ensuring security in ATMs. At the end of 2020, 94.5 percent ATMs were EMV compliant. Also, during the same period about 96.5% ATMs were equipped with Anti-Skimming device, which is a positive sign.

Table-10 shows the market share of ATMs in 2020. PCBs are leading in the ATM business in Bangladesh. The market share of other types of banks is very insignificant.

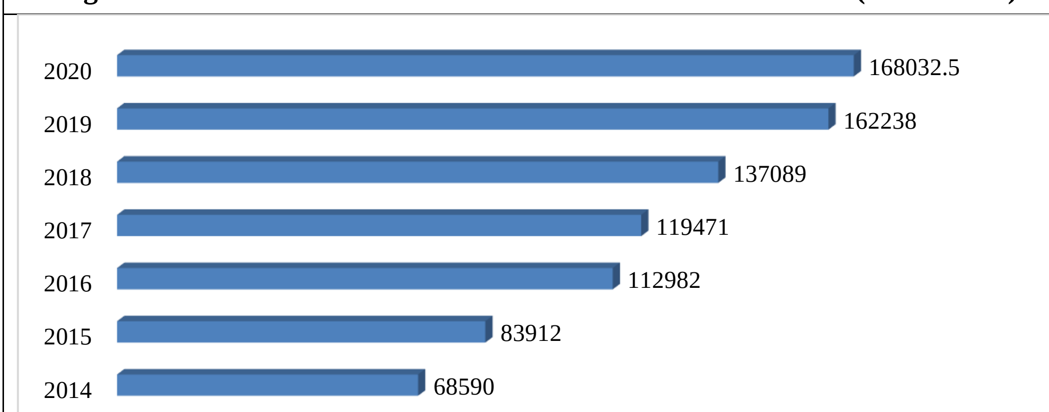
Figure-10: ATM Market Share in 2020



Source: Economic Trend, (July 2021), BB

At the end of 2020, total number of ATM transaction was recorded at 19.31 crore which was 20.52 crore in previous year (2019). In case of volume of transactions, a remarkable growth trend is observed which is shown in figure-14.

Figure-11: Volume of Transactions in ATMs from 2014 to 2020 (Crore BDT)



Source: Economic Trend, (July 2021), BB

Table-10 shows the ATM banking facilities provided by Bangladeshi banks.

Table-10: ATM Banking Facilities (% of Banks)

SL. No.	Services	(% of Banks)
1	Account balance enquiry	100
2	Mini statement printing	95
3	Statement request	23
4	PIN change	100
5	Request for Cheque Book	10
6	Fund transfer within customers' own accounts of same bank (Intra-bank)	25
7	Fund transfer within different customers' accounts of same bank (Intra-bank)	21
8	Fund transfer within different customers' accounts of different banks (Inter-bank)	13
9	Mobile Top-up	55
10	Utility Bills	4
11	Payment of School/College/University tuition fees	12
12	Mobile Banking Transaction	28

Source: Survey Information, 2021

Banks faces the following Key challenges regarding ATM banking (Box-3):

Box-3: Problems and Challenges Related to ATM Banking

1. Still the e-cards of all banks are not EMV protected. That's why there is a scope of fraud, when a card holder of a protected bank uses the card in an unprotected bank's ATM.
2. More cyber fraud awareness program should be conducted among customers to combat ATM frauds.
3. Inter-bank transaction fee using ATMs should be minimized.
4. Unattainability of suitable sites for ATM and excessive rent for existing and prospective sites.
5. Load shedding of power supply is a common scenario in rural and semi urban areas. We need to ensure 24/7 power supply with the proper backup of UPS.
6. All POSTs are not EMV compliant. If Chip/EMV technology is introduced both in ATM and POST, then card fraud might be prevented significantly.

7. Some banks carry more time to resolve dispute related to ATM services. After introducing NPSB operation by BB, it is slightly condensed.
8. Some banks are not routing other bank's card to NPSB.
9. Unlike VISA/Master Card, proprietary debit card doesn't have NPSB logo on e-Card and POS machine, which creates misunderstanding for the customer and merchant. As a result, merchants are not accepting proprietary debit card at their POS machines.
10. ATMs should be protected with newly introduced security features like anti-skimming, PIN shield etc. so that banks can cope up with rapidly changing technology which the skimmers use to attack ATMs.
11. Frequent Link down and Link up time.
12. Banks should ensure that the security companies and its employees are competent enough to provide reliable and quality services in terms of ATM fraud management.
13. Proper monitoring of off-site ATM, because fraudsters target the ATMs which are located at remote locations.

Source: Survey Information, 2021

3.10 Cash Recycler ATM/Cash Recycler Machines (CRM) and Cash Deposit Machine (CDM)

New types of ATMs are now transforming the banking industry. These machines, called CRMs, are designed to recycle deposited cash for use in subsequent withdrawal transactions. Only 28% banks in Bangladesh installed CRMs and 780 CRMs have been installed by these banks in 2020, increasing from 254 in 2019, which shows a huge growth. In 2020, 6231.7 crore Tk. was transacted through CRM and number of transactions was 9649175.

Using CDM (Cash Deposit Machine**),** customers can deposit money in real-time and get instant reflections of the transaction with an instant notification message. In 2020, only 47% banks in Bangladesh installed CDMs and there were 1648 CDMs in the market which was 1407 in 2019. One point worth mentionable that, only 30% CDMs are installed in rural areas. In case of CRM the figure is less than 14%.

3.11 Core Banking Software (CBS)

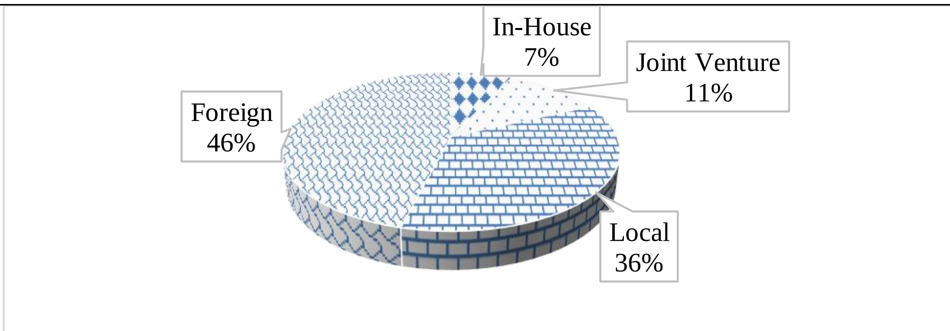
Core Banking Software is essential for the smooth operation of an online banking business. In Bangladeshi banks, Bank Ultimus (16%), Temenos T24 (14%), Flexcube (13%), and Flora Bank (13% each) are widely used. I-Stelar, MiSys, and Ababil were also popular CBS (Table-11).

Table-11: List of Banking Software in the Market in 2020

S. No.	CBS	Types of CBS	% of Branches	% of Banks
1	Ababil	Local	3.6	5.4
2	Bank Ultimus	Local	8.7	16.1
3	Electronic and Integrated banking System (eIBS)	In-House	3.3	1.8
4	Electronic Basic Banking System (eBBS)	In-House	0.3	1.8
5	Finacle	Foreign	3.1	5.4
6	Flexcube/UBS	Foreign	6.5	12.5
7	Flora Bank	Local	15.7	12.5
8	HSBC Universal Banking	In-House	0.1	1.8
9	Infinity Banking System (Not CBS)	Local	3.8	1.8
10	Intellect Core Banking System	Joint Venture	17.8	3.6
11	International Comprehensive Banking System	Foreign	0.1	1.8
12	iSmart	Foreign	0.1	1.8
13	iStellar	Joint Venture	3.4	7.1
14	Kastle Core Banking Solution	Foreign	0.7	1.8
15	Misys Equation	Foreign	2.5	5.4
16	Pubali Integrated Banking System (PIBS)	In-House	4.6	1.8
17	Silverlake	Foreign	0.3	1.8
18	TCS Banking Solution	Foreign	1.07	1.61
19	Temenos T24	Foreign	25.4	14.3
20	Winfos	Foreign	0.1	1.8

Source: Survey Information, 2021

Figure-12: Percentage of Banks using Different Types of CBSs



Source: Survey Information, 2021

Figure 12 depicts the CBS market's dominance status. Foreign CBS controls approximately 46% of the CBS market, while local CBS controls only 36%.

3.12 Implementation of Core Banking Solution (CBS) Features and Controls

Only 15 percent banks have implemented all 1137 controls mentioned in 'Core Banking Solution (CBS) Features and Controls' published by Bangladesh Bank, while 85% banks have partially implemented the guideline. The implementation status of banks regarding these 1137 controls is shown in Table-12.

Table-12: Implementation Status of CBS Controls

% of Controls Implemented out of 1137	% of Banks
Less than 25%	0
25% to less than 50%	0
51% to less than 75%	20
75% to less than 100%	65
100%	15

Source: Survey Information, 2021

Box-4 and Box-5 summarize major limitations/drawbacks of foreign CBS compared to local CBS and major limitations/drawbacks of local CBS compared to foreign CBS, respectively.

Box-4: Major Limitations/Drawbacks of Foreign CBS compared to Local CBS

1. Require more customization to comply the local rules.
2. Foreign payment processing problem.
3. Foreign software cost is higher compared to local software cost.
4. Customization is complex than local CBS.
5. More time needed for supporting any critical issue and customizing the software. In some cases, vendor deny to do some particular customization.
6. Not comply all the controls of BB CBS guideline.
7. Changes as per regulatory requirement is costly.
8. On demand requirements of BB and customer/bank are difficult to incorporate. Moreover, it is costly.
9. The CBS should have the feature of business agility to respond quickly to market and customer demand, but the functionality of local CBS does not support rapid development and launch of new products,
10. Functionality does not support business innovation and expansion.
11. Absence of New and improved performance monitoring tools and consoles.
12. Re-engineered business process required.
13. Software architecture should be Improved, need to increase scalability and required to enhance system performance.
14. It requires simplified and easier process/procedures to commit periodic fixes and accomplish new product updates as needed.
15. Operational risks are higher and more customizations needed.
16. Existing version of CBS is not going to be fully supported by vendor.
17. CBS is running for more than 5 years. Support will become an issue if the product is declared “End of life” by the vendor.
18. To cope up with on-going Fin-Tech Banking industry trend and cater on-demand customer digital requirement, existing system is either required to be upgraded or platform to be changed.

Source: Survey Information, 2021

Box-5: Major Limitations/Drawbacks of Local CBS compared to Foreign CBS

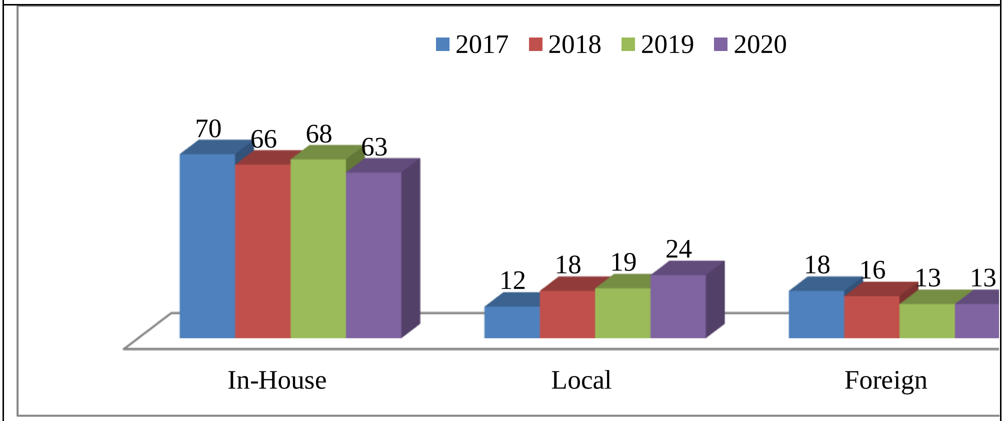
1. Not fully platform independent.
2. Require to update security layer.
3. Customization and development process completely vendor dependent.
4. Number of features/functions is much lower than Foreign CBS.
5. Number of parameters is lower than Foreign CBS.
6. Functionality, Security and Version Control.
7. Lack of skilled manpower support from vendor side.
8. Resource shortage, unavailability of diversified features, lack of smart digital features, lack of robustness of the system; standard integration facility is not available.
9. Need to develop structured architecture as per industry best practices and regulatory requirement.
10. Vendors are unwilling to invest in the R&D sector.
11. The system is not micro service architecture based and the APIs are not available for the services.
12. Unavailability of detail log of activities.
13. Controlling of the system is not up to the mark.
14. Integration with other system is costly.
15. Support and service of vendor is not satisfactory.
16. Absence of standard features of CBS.

Source: Survey Information, 2021

3.13 Application Software

Banks used a variety of application software for their day-to-day operations in addition to CBS. The average, minimum and maximum number of application software used by banks was 41, 8 and 67 respectively. In 2020, among the software, 63% were developed by the banks themselves, 24% were local and rest were foreign software (Figure-13). Use of local application software has increased compared to last year, while use of in-house application software has decreased. Moreover, in 2020, 76% banks introduced new applications for their business operations.

Figure-13: Share of Application Software from 2017-2020 (% of Software)



Source: Survey Information, 2021

3.14 Data Management

Database is the heart of a bank for managing data, with 73% banks using ORACLE for managing their data, and the others used MS SQL server and DB2. In case of DC and NDC database replication, 48% and 42% of banks used synchronous and asynchronous methods, respectively. Rest of the banks used hybrid methods for replications in DC and NDC.

3.15 Data Center (DC) and Disaster Recovery Site (DRS)

Data Center (Production or Primary Site)

Except for foreign banks, almost all data centers are in Bangladesh. Most of the DCs (52%) located at Motijheel/Dilkusha and the rest of the DCs are located at Gulshan, Purana Paltan, Banani, Dhanmondi, Bashundhara, Vatara, and Kawran Bazar.

Disaster Recovery Site

According to BB ICT Security Guidelines, the bank should establish a DRS which is geographically separated from the production/primary site (minimum of 10 kilometers radial distance but choice of different earthquake/seismic zone will be ideal) to enable the refurbishment of critical services and continuation of business operations when a disruption occurs at the primary site. If DRS is not in separate earthquake zone, bank may setup a third site in different seismic zone which will be treated as Far DC (FDC) and in that case the DRS located at near location with same seismic zone will be treated as Near DC (NDC). In practice, banks treat NDC as 1st DRS and FDC as 2nd DRS. In 2020 about 90% banks had NDCs which was 88% in 2019. Only 35% banks had FDCs which was 28% in 2019. Slight improvement is observed in establishing DRS.

Among the banks having FDCs, about 40% FDCs have been setup in Dhaka, Gazipur and Sirajganj and they are at high risk of earthquake. Because they are located in the same seismic zone which is not recommended by BB. Another upsetting matter is that 58% NDCs and 88% FDCs are not hot. They are operating in either warm or cold mode and accordingly these banks might not be able to run business operations or critical services immediately after any man-made or natural disaster, like earthquake.

Mode of Replication with DC

Active-active replication mode between DC and NDC facilitates the banks to run live operations from NDC to ensure optimum utilizations of IS resources in data center. Consequently, banks will be able to recover live operation of banking business quickly when primary data center goes down due to major natural or man-made disasters. According to our study, among the banks having NDC, 42% and 58% banks supported active-active and active-passive replication mode, respectively. In previous year, 36% NDCs had active-active mode. In case of FDC, only 13% were active-active and 87% were active-passive mode. According to known best practice, banks should maintain at least one DRS operating in active-active replication mode.

Live Testing of Business Operations from DR Site

Regular and periodic testing of live business operations from DR site is a very significant issue for the centralized online banking system. Because this practice will increase the level of confidence and expertise of recovering data and business operation in case of any IT disaster. However, 73%, 76% and 80% banks tested live operation from DRS in 2018, 2019 and 2020, respectively. Among the banks that tested the live operation of business in 2020, about 75% and 68% banks did the test in working day and holiday, respectively. But our survey reveals that most of the local banks (90% banks) did not perform live test of whole business operations from DRS; they performed it partially (some limited applications or services). Considering the best practice, banks should run 24 hours live business operations of whole e-banking functionalities from DRS at least once a month on working days.

Table-13: Live Test of Business Operation and Data Replication

Live Test and Data Replication	% of Banks
Perform Live Test of Business Operation from DRS	80
Perform Live Test of Business Operation only in Holidays	68
Perform Live Test of Business Operation only in working days	75

Source: Survey Information, 2021

Each bank should recruit Certified Data Centre Design Professional (CDCDP) for effective maintenance of DC and DRS. At the end of 2020, only 44% banks have employed CDCDP, which were 38%, 41% and 42% in 2017, 2018 and 2019, respectively. For effective management of DC/DRS operations, international certification is a vital issue**.**

There are two well-known International Certification Authority for Data Centers (DC) globally. They are 'Uptime Institute' and 'The Telecommunications Industry Association (TIA)'. Both of them rate DCs as Tier 1,2,3,4 depending mostly on High Availability (HA).

The Uptime Institute Tier Topology only covers Electrical and Mechanical systems, but the TIA-942 gives certifications for the full data center facilities (Mechanical, Telecommunication, Electrical, Architectural, Site Location, Fire Safety, Physical Security etc.). Therefore, banks may achieve TIA-942 certification which is important for today's mission critical data centers.

Table-14: List of some Organizations taken the Certifications issued by Uptime Institute

Sl.	Organization	Location	Project	Awards
1.	Bangladesh Computer Council (BCC)	Dhaka, Bangladesh	National Data Center, Expansion, Agargaon.	Tier III Certification of Design Documents
2.	Bangladesh Computer Council (BCC)	Gazipur Dhaka, Bangladesh	National Data Center, Kaliakair	Tier IV Certification of Constructed Facility and Tier IV Certification of Design Documents
3.	bKash Limited	Dhaka, Bangladesh	bKash Data Center, ST	Tier III Certification of Design Documents
4.	Felicity Big Data-II Limited	Jessore, Bangladesh	Felicity Big Data II DC	Tier III Certification of Design Documents

Source: Survey Information, 2021

Table-15 shows the name of some banks that achieved the certification of TIA related to DC/DRS management. But, no local banks achieved complete certification of DC and DRS.

Table-15: Banks that achieved International TIA Certification

Name of Banks	Name of Certification	Location / Address
Prime Bank	ANSI/TIA-942 Site (Rating 3)	Prime Bank, DR Tower (Second Floor), Purana Paltan, Dhaka.
DBBL	ANSI/TIA-942 Site (Rating 4)	Dutch-Bangla Bank (DBBL), Dumni Bazar, Khilkhet, Dhaka.
AAIBL	ANSI/TIA-942 Design (Rating 3)	AAIBL DRS, SA Khan Tower, 3/A East North Darus Salam Road, Mirpur-1, Dhaka.

Source: Survey Information, 2021

3.16 Cost minimization for IT System and IT Operation in Banks

Financial organizations (FIs) should develop an effective cost minimization action plan for the maximization of revenue. Banks invested huge money in IT system for the automation of financial services. Therefore, banks should have proper plan and cost minimization strategy for their e-banking system. Due to Covid-19 pandemic situation, the banking authorities have taken this issue seriously for ensuring cost minimization. About 92% banks replied that they have IT cost minimization plan which was 88% in previous year (2019). But most of the cases, it is found that the documents of IT cost minimization strategy and plan are not comprehensive and duly approved by the right authority. The following table (Table-16) shows the different factors that are considered by the banks in reducing the cost of IT operations.

Table-16: Factors that are Considered by the Banks to Reduce the IT Operation Cost

Factors	% of Banks		
	2018	2019	2020
Virtualization	95	100	100
Hosting services	14	15	18
Private Clouding	14	27	28
Public Clouding	10	20	20
Mail Server	52	56	56
Outsourcing/Sharing	29	33	35
Open source for Desktop OS and Office software	10	27	27
Process Simplification	-	53	54
Change of Depreciation Method	-	7	7
Virtual Training Program	-	80	80
Virtual Official Meeting	-	80	80

Source: Survey Information, 2021

Suggestions given by ITD of banks to minimize IT operation cost is summarized in Box-6.

Box-6: Suggestions given by ICT division of Banks to Minimize IT Operational Cost

1. Banks can emphasis on using in-house developed system or local software.
2. Email/Online correspondence instead of paper work.
3. Ensure optimum utilizations of IT/IS resources.
4. Increase the applications of Virtualization at all levels – Hardware, Network and Storage.
5. Effective process reengineering.
6. Implementation of Green IT.
7. Online e-banking support.
8. Increase use of Virtual Terminals (VTs) in e-banking operations.
9. Use of open source instead of proprietary system.
10. Provide Awareness training to all employees of banks on IT cost minimization strategy and process.
11. Office Automation.
12. Enhance the use of Virtual Currency and Digital Payment.
13. Systems integrations.
14. Consolidation.
15. Both DRS (NDC and FDC) may be kept as active-active with DC and services may be run from both ends instead of keeping one site idle/stand by.
16. Data Center renovation with latest cost-effective solution.
17. Increase Applications of AI and Robotic process in e-banking operations.

Source: Survey Information, 2021

3.17 Virtualization and Clouding in Banks

Virtualization is the creation of a virtual - rather than actual - version of something, such as an operating system, a server, a storage device or network resources. There are six areas of IT, where virtualization is making improvement: server, storage, network, desktop, data, and applications. Topmost five business benefits of virtualizing servers are: faster server provisioning and deployment, greatly improved disaster recovery, increased productivity, noteworthy energy cost savings, and reduced hardware costs. Therefore, the banking sector should maintain effective policy for virtualization technology (VT). In 2020, 87% banks utilize virtualization technology which was 80% in previous year; but very few banks cover all areas to utilize VT. Table-17 and Table-18 show the deployments status of various VT in different areas or platforms in the e-banking system.

Table-17: Areas of Virtualization

Areas of Virtualization	% of Banks		
	2018	2019	2020
OS	37	71	71
Hardware	62	62	62
Storage	20	24	26
Application	16	19	20
Network	8	14	18
Desktop	4	4	6

Source: Survey Information, 2021

Table-18: Kinds of Virtualization Technology Used

Virtualization Technology Used	% of Banks		
	2018	2019	2020
Hypervisor	46	52	47
VMware	80	71	81
Containers	4	4	5
Hyper-V	4	4	4
IBM Power V	4	4	4
OVM	4	4	4
IBM LPAR	8	8	8

Source: Survey Information, 2021

Cloud computing is the use of various services such as software development platforms, servers, storage and application, over the internet. Clouding service offers faster innovation, flexible resources and economies of scale and also delivery computing services—servers, storage, databases, networking, software, analytics, intelligence and more. There are three categories of cloud deployments - public, private and hybrid. Cloud computing is a big shift from the traditional way of doing businesses thinking about IT resources. Business organizations can avail different types of cloud computing services such as IaaS, PaaS, and SaaS. The organizations are turning to cloud computing services due to six common reasons - global scale, speed, cost, productivity, performance, and security.

It is observed that 25% banks have clouding infrastructure which were 23% and 12% in the **previous two years (2019 and 2018).** Moderate improvement is observed in respect of utilizing cloud services. Among the banks having cloud services, 60%, 30% and 20% banks use private, public, and hybrid cloud services respectively.

3.18 Software Defined Networking (SDN) Services

By using SDN architecture, the network becomes more programmable and flexible by separating the control plane from the data plane. SDN uses a centralized SDN controller to deliver software-based network services and also SDN management makes network configuration more efficient, and improves network performance and monitoring. Under SDN platform, network administrator can manage network policies from a central control plane without having to handle individual switches. SDN architecture includes the following components: SDN Application, SDN Controller, SDN Data path and SDN API.

About 20% banks mentioned that they have implemented SDN services through the following vendors/solution providers – CISCO, VMware, Flora Ltd., Square InformatiX Ltd., Omega Exim Ltd. and Smart Technology Ltd. to setup and configure SDN. 16% banks are in partial stage of implementation. However, 64% banks did not take any initiatives at all in this regard.

Banks have considered the following factors in selecting vendor for implementing SDN.

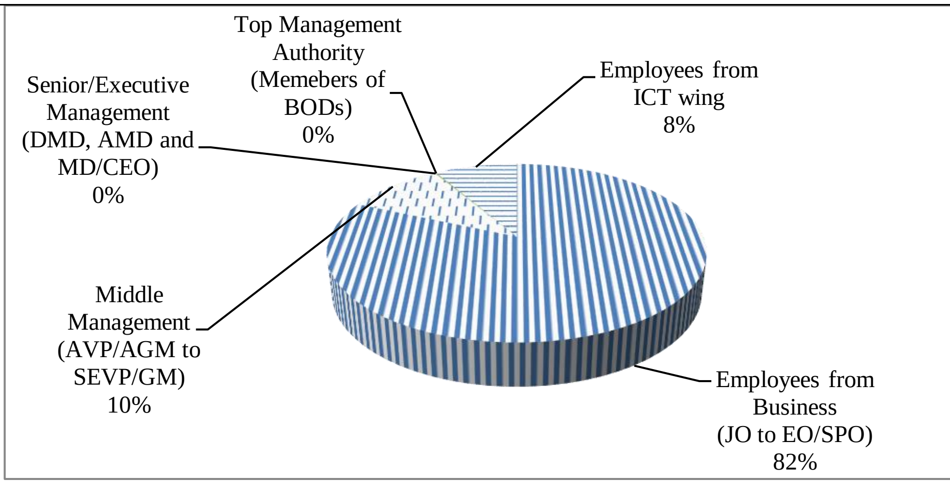
Box-7: The Main Factors or Strength of Choosing/Selecting SDN Vendor

1. Global brand, easy to manage, strong documentation, most secure, and smooth support & services.
2. Good reputation in providing solution.
3. Features of easy Integration.
4. Low price and more competent.
5. Capable engineers and good market portfolio.
6. Deployed by Original Equipment Manufacturer (OEM) (Cisco Systems, Inc.) itself.
7. Have the experiences of deploying in many reputed organizations.
8. Have adequate expert professionals of local agent in case of foreign products/applications.
9. Pioneer and have worldwide acceptance.
10. Wide range of features including east-west traffic monitoring.
11. Strong & good Support Service.

3.19 Training

To cope up with the changing business environment training is a must for the employees. It delivers understanding and information updating concerning the use of technology in various IT areas which help them to achieve customer satisfaction and ensures success of the bank in this competitive world. Employees who receive required training are better able to execute their job; also, they are more likely to feel appreciated if they are invested in and therefore, less likely to change companies. But, this is ignored by most of the banks in our country. In 2020, only about 1.2% of total IT budget went to training purpose. Furthermore, we have found that in many cases, importance of IT peoples' training was overlooked by bank management. In our banking industry, the number of IT personnel is 5875. In 2020, total 9380 employees (both business and IT) received training. Among them, only 751 (8%) IT personnel had the opportunity to receive ICT training, whereas 8629 (92%) employees from business wing were sent for training (Figure-14).

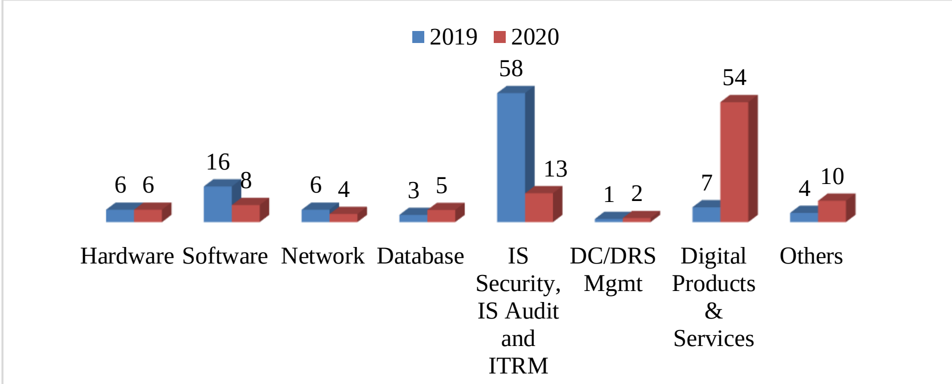
Figure-14: Categories of Employees Who received ICT related Training in 2020



Source: Survey Information, 2021

Status of training provided by banks in the last two years is shown in Figure-15. Training on 'Database' and 'Digital Products and Services' increased in 2020 as compared to 2019; however, training on other important IT areas like 'Network' and 'IS Security, Audit and ITRM' was overlooked.

Figure-15: ICT Training Provided in 2019 and 2020 (In %)

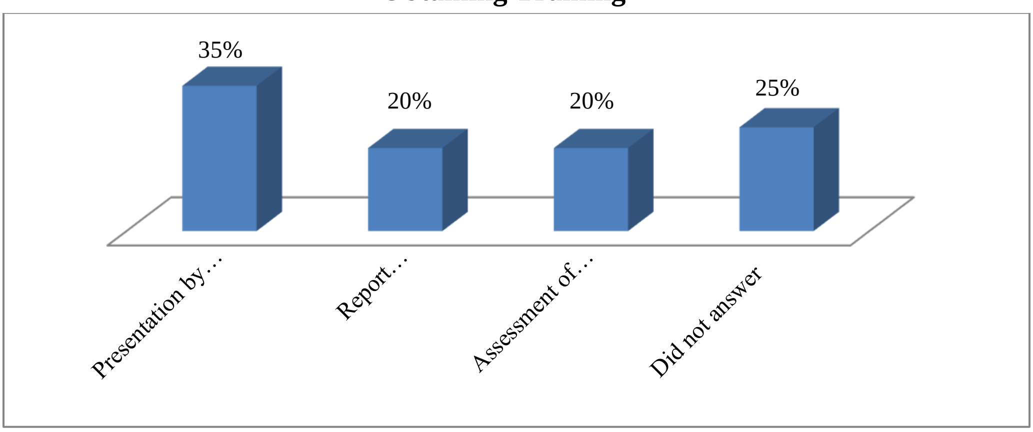


Source: Survey Information, 2021

We have found that pandemic situation did not negatively impact the status of training very much. The number of trainees during 2019 and 2020 were, more or less, similar. Another important observation is that during this pandemic situation virtual training has achieved immense popularity in banks. In 2019, 99.1% training was conducted physically and the rest virtually, while in 2020, 75.4% training was conducted virtually and the rest physically. More than 90% banks arranged virtual training for their executives through 'Zoom', while 33% banks used 'MS Teams' and 'Cisco WebEx'. Other popular programs used by banks were 'TrueConf' and 'Google Meet'.

After obtaining training by an employee, banks must take some initiatives to measure the actual effectiveness of the training. It is found that, 35% banks arranged a presentation session to accomplish this objective (Figure-16).

Figure-16: Actions/Initiatives Taken by Banks after an Employee Obtaining Training



Source: Survey Information, 2021

Post-training evaluation is an imperative phase of any training program. It provides a valuable understanding about the program from learner's viewpoint. In addition to this, feedback from participants can help an organization to evaluate the effectiveness of the particular training, make developments, and most importantly they can formulate strategy for upcoming courses. But in our country this significant task is severely unheeded. We have found that only 28% banks have organized post training assessment program for their trainees by taking written exam after training.

4.0 Challenges in IT Operations of Banks and Role of Central Bank (BB)

4.1 Challenges Related to IT Operations in Banks

Executives of IT division face different challenges or obstacles to manage IT system efficiently. The list of challenges (given by CTOs of sampled banks) are summarized in box–8.

Box-8: Views of Heads of ITD in Different Banks

Challenges/Obstacles/Limitations
1. To ensure redundancy of skilled manpower responsible for critical systems. 2. The quality of sensitive and core IT Devices (Database and Application Servers, Core Router/Switch, Storage System/SAN) is not very high. 3. Redundancy of sensitive and core IT Devices is not available. 4. Difficult to obtain allocation of skilled manpower or IT resources from management. 5. Allocation of sufficient budget for skill development is difficult. 6. The quality and design of auxiliary systems like power and cooling system is an obstacle. 7. Shortage of professional and trusted vendors having sufficient skilled and expert manpower in providing quality support and services. 8. Shortage of expert employees in IT support and management. 9. Insufficient budget and management support for implementing Privileged Access Management Solution and NGFW of Internet, Email and Web application to mitigate or prevent internal and external cyber threats/attacks. 10. Establishing, sharing and maintaining common robust infrastructure for DC/NDC/FDC. 11. Formation of ISACs (Information Sharing and Analysis Centers) for our banking sector. 12. Formation of Advanced Threat Protection Team (ATPT).

Source: Survey Information, 2021

4.2 Role of Bangladesh Bank for Maintaining Better IT Operations in Banks

As a regulatory body, Central bank has been playing a vital role to maintain reliable and secured IT operations in banks. Besides, due to rapid growth of digital innovativeness in banking products and services, the banking community expects more realistic and effective steps from BB. Opinions and expectations of banks regarding the role of central bank are summarized and presented in table-19.

Table-19: Possible Roles of Central Bank (% of Banks)

Sl No.	Possible Roles of Central Bank
1.	i. Customer disputes in providing inter-bank fund transfer services using NPSB, RTGS, BEFTN and BACPS are increasing. BB may take some initiatives (centrally tracking and monitoring system) to lessen disputes and resolve quickly. ii. BB may also execute proper steps to find the delay time/transaction processing time among all routing points from starting to ending while performing fund transfer process. This may help to find out the actual time and causes of delay.
2.	In case of regular DRS testing, severe weakness is observed in banks. BB may increase the rate of inspection to ensure instant activation/running of whole business operation from DR site in both office open day and holiday.
3.	BB inspection team may be formed only including expert having adequate academic qualifications and professional skill and experience.
4.	i. Bangladesh Bank (BB) may form a committee with members of scheduled banks to ensure compliance of the banks by formulating a guideline for ICT development. ii. BB may review and upgrade its ICT Security Guideline in each year by the above committee to incorporate new security threats for the development of IT operations. iii. BB may allow all banks to participate in the formulation process of any new guidelines.
5.	Immediate steps may be taken by BB to set up robust and reliable infrastructure for a common DRS for all banks at separate earthquake zone.
6.	i. Central bank already supervising the IT operations of commercial banks by proper policy, circulars, onsite and offsite supervision. Now they can push the banks for achieving the standard certifications. ii. BB can also advice the banks to allocate the budget for standardization of IT operations.
7.	Effective steps may be taken by BB to ensure transparency in IT governance of banks.

8.	i. Central Bank may introduce a Central SOC system for oversee all traffic of the bank in order to identify cyber threat or attack. ii. BB can arrange Cyber Sensor for all banks.
9.	BB may take important role to develop adequate fund and form a consortium of all banks for developing a common robust core banking software (CBS) to reduce dependency on foreign CBS and cost.
10.	i. Our banking sector should immediately establish a center for sharing online financial fraud related recent and emergency issues, analysis of current and upcoming online threats and frauds, operational problems and possible solutions. With support of central bank, BIBM may take effective steps in this regard. ii. Central Bank may arrange a wing-wise discussion cell/forum to share IT operational issues and risk and develop mitigation plan.
11.	**BB and BIBM may take joint initiatives to execute or accomplish the following issues or matters:** i. BB may provide required guidance and assistance to BIBM to equip with more skilled ICT manpower and IS resources so that the role of BIBM becomes more hardheaded. ii. To arrange special Certification program on VA and PT; Threat Intelligence; Cyber Security; Incidence Handling and Response; and Forensic Investigation. iii. To arrange or coordinate hands on training on some important security topics like VAPT, SOC, Log Source Analysis etc. iv. To organize mandatory training with global certification program. v. To arrange advanced training by foreign experts. vi. To organize awareness program of standardization. vii. To establishing forum for the community of banking technology such as Bank-CERT. viii. To conduct knowledge session with decision makers. ix. In each year, a day-long ICT conference may be organized under the leadership of BB Governor where the MDs/CEOs and HoIT/CTOs/CIOs of all banks and the CEOs of outsourcing vendors will participate. In each year conference will be held focusing on emerging and challenging issues/subject like Cyber security and Risk management, Technology based new products and services, FinTech and RegTech etc. Three banks and three vendors may be rewarded based on their effective contribution in developing digital and innovative banking products and services. x. Immediate steps should be taken to build up separate specialized institution/academy for the development, research, training and consultancy in the area of innovating and automated banking/financial technology, digital transformation, cyber threat and IT risk management.

Source: Survey Information, 2021

5. Implementation Status of Previous Year (2020) Recommendations of our Review Study for developing IT Operations of Banks in Bangladesh

The review study covers the status and changes in the IT operations of banks in each year. In the Review Workshop program of previous year (2020), the review team raised some challenges that are being faced by the IT department of banks in 2019. The major areas of challenges were - IT skills development, IT infrastructure development, IT governance, Data communication, DC & DRS management and business continuity, IT audit and IT security. The implementation status of the recommendations of 'Review of IT Operations of Banks in Bangladesh-2019' is stated in table-20.

Table-20: Implementation status of the Recommendations of Review of IT Operations of Banks in Bangladesh

Sl.	Issues and Recommendations for the year 2019	Implementation Status in 2020
1.	Budget for security, training and audit	Slightly improved in IT Security but decreased in training and audit
2.	Increase the number of CDM and CRM instead of ATM	Reasonable Increase
3.	Digital Wallet service by banks	Remarkable Growth
4.	Ratio of market share between Foreign and Local CBS in our banking sector	Same as before
5.	Market share of Local and in-housed developed Application software compared to foreign software in our banking sector	Slightly increased in local software
6.	Setting up DRS at separate seismic zone having strong infrastructure and effective support services for ensuring quick and reliable backup operations from DRS	Slightly improved
7.	Regular and periodic testing of live business operation from DRS	Slightly improved
8.	Maintaining a comprehensive and effective IT cost minimization plan and strategy for e-banking system	Slightly improved
9.	Use of virtualization technology and Cloud computing services	Slightly improved
10.	Use of Software Defined Network	Slightly improved

Source: Survey Information, 2021

6. Summary of Observations and Recommendations

One, IT Investment and Budget: All banks together invested Tk. 1666 crore in IT Systems in the banking sector in 2020. It is seen from the survey that IT investment in 2020 is 32.77 percent less compared to 2019. One of the reasons for less investment in this year might be the adverse impact of the COVID-19 pandemic on local and global business, especially the banking business. Lack of long-term vision, proper planning and initiatives, shortage of manpower, poor IT budget, weakness of business process reengineering, delay in procurement process and lack of appropriate and advanced training are major challenges of banks to improve their IT infrastructure. Banks may allocate relatively larger portion of annual profit over the existing practice of insignificant portion to overcome these problems and boost up the existing IT infrastructure. Through proper training and skills development program, leadership quality and efficiency of IT project implementation team may be developed for successful design and implementation of banking automation projects.

Two, ADCs and the Use of FinTech: Bangladeshi banks have already established several ADCs to serve their customers 24 hours a day and 365 days a year. It is evident that though mobile banking is growing very fast in Bangladesh but only 15 banks offer this service. Whereas 95% banks offer ATM banking services as it gained popularity among customers mainly for cash withdrawal. Though, Internet banking has the lowest transaction cost in Bangladesh and has the potential to cover most of the banking services, market share of this channel is not satisfactory. About 90% banks though providing this service, majority offer transactional services in a limited way. Banking through smartphone apps have a prominent future as 62% banks have promoted this service for their customers. Banks those are lagging behind in providing this service should seriously consider this issue. One thing worth noting from the findings that we are not habituated with some FinTech based services such as chat bot that are already being popular in developed countries. Only 8% banks in our country actually using these channels. Banks should pay proper attention to set up such interactive channels for tech-savvy customers.

Three, Augmenting the setup of CDM and CRM: The advantage of installing CRM is improved efficiency both in terms of operations as well as costs. But in Bangladesh only 28% banks installed CRMs and 780 CRMs has been set up by these banks in 2020, which were 254 in 2019. Also using CDM customers can deposit money in real-time and get instant reflections of his transaction with an immediate notification message. In 2020, there were only 1648 CDMs in the market which was 1407 in 2019. Another point worth noting that 86% CRMs and 70% CDMs are installed in urban areas indicate that people of rural and semi-urban areas are not receiving the full advantage of these ADCs. So, bank management should formulate appropriate strategy and take initiatives to increase the number of these ADCs particularly in rural areas.

Four, Core Banking Software: When a bank wants to purchase a CBS, they are looking for appropriate technology, regulation, security, compliance and control. As seen from the study, no single software vendor controls the Bangladeshi market. It is noteworthy that foreign software vendors have a comparatively resilient position in Bangladeshi market. It is also seen that slowly local CBSs are being replaced by foreign CBSs. In our survey, many banks also showed their desire to replace their local and legacy systems with foreign systems. If this tendency prevails, it is no wonder that in the upcoming days foreign CBSs will take the place of local CBS, thereby harming the local software market and national economy. The answer of the question 'why banks have a strategy towards foreign CBS when there is a number of local CBSs operating in the market for a relatively long time and their market share is also good' revealed that though local packages are cost-effective, but these are found to be less well-designed and flexible to a bank's specific business demands, and hence less satisfactory. Government and local CBS vendors may think this issue very seriously and take necessary actions to hold their position in the competitive market.

Five, DRS Management for Uninterrupted IT Operations: The 40% banks which have FDCs in Dhaka, Gazipur and Sirajganj are at a high risk of earthquake because both DC and DRS are situated in the same seismic zone which is not recommended by BB. Another alarming issue is that 58% NDCs and 88% FDCs are not hot, they are operating in either warm or cold mode. In that case, banks might not be able to run business operations or critical services immediately if any disaster occurs.

Banks should take immediate action to set up Hot DRS at separate seismic zones. Both Govt. and BB may take initiatives to provide robust infrastructure and support services for maintaining reliable operations from DRS. Using proper scientific plan (virtualization of server/storage, KVM switch, smart rack and other standard solutions) banks can ensure optimum utilization of space and reduce the area of DC/DRS to minimize the operating cost. For effective management of DC/DRS operations, international certification is a vital issue. Very few banks achieved this certification. Banks should achieve global certification of Tier 3 or 4 DC for ensuring fully fault-tolerant e-banking operations and employ sufficient CDCDPs to handle the DC management properly.

Six, Replication Mode and Live Testing of Business Operation from DRS: Mode of replication of NDC with DC should be in active-active mode so that banks can run live operations from NDC to ensure optimum utilization of IT resources/assets. With this system, banks will be able to restart the live operation of banking business quickly if real disaster occurs. Only 42% and 13% banks support active-active replication mode with NDC and FDC, respectively. According to best practice banks should maintain at least one DRS (NDC or FDC) operating in active-active replication mode.

Banks should have proper policy and guidelines of business continuity and disaster recovery management. Bank authority should have proper support and close monitoring to ensure effectiveness of the policy related to ITDRP.

Regular and periodic testing of DRS is an important and crucial issue for a centralized online bank. This type of testing increases confidence and expertise of recovering data and business operation in case of any disaster. About 80% banks tested live business operations from DRS in 2020. Among them, 68% banks tested the live operation in holidays. They were fearful of testing during working hours. Another important observation is that most of the local banks (90% banks) do not perform live tests of whole business operations from DRS, they perform it partially (some limited applications or services). To reduce risk, banks should run live operations of the whole business function from DRS at least once a month on working days for the whole day (24 hours).

Seven, Cost Minimization Strategy to Reduce IT Cost in Banks: Banks invested huge money in IT system for the automation of e-banking services. Therefore, banks should have proper cost minimization strategy and plan for their IT system. Though 92% banks mentioned that they have IT cost minimization plan but they should develop comprehensive documents of cost minimization strategy and plan approved by the right authority. The banks should consider and implement all the appropriate factors (shown in Table-16) to reduce IT cost.

Most of the banks (87%) utilize virtualization technology but scale of application is very limited (Table-17). Banks should implement virtualization in six areas of IT: OS, Application, Desktop, Hardware, Network and Storage to reduce IT cost. Only 25% banks have clouding infrastructure. Banks can be benefitted from cloud computing in different ways - cost savings, security, flexibility, mobility, disaster recovery and automatic software updates etc.

The bank management should give full attention to incorporate virtualization technology and clouding services in full scale of operations and they should also consider the valuable suggestions or comments given by CTOs/CIOs of banks (mentioned in box-6) to minimize IT operation cost.

Eight, Software Defined Networking (SDN) Services: Only 20% banks have implemented SDN services and 64% banks did not take any initiatives at all. Only 16% of banks are in partial stage of implementation. Banks can be benefitted from SDN services as follows - simplification and centralization of enterprise business network management; agility and the ability to create policy driven network supervision and implementing network automation; allowing the creation of a framework to support more data-intensive applications like virtualization and big data, video and audio transmissions much easier; traffic programmability; ability to direct and automate data traffic makes implementing quality of services (QoS) for voice over IP (VOIP); and **lessen capital expenditure by** easily optimizing existing network devices. By using SDN facility, IT teams can easily change network configurations with no effect to the network and also be able to manage physical and virtual switches and network equipment from a single centralized controller. The banks management should play significant role to implement SDN fully as early as possible by allocating sufficient budget, hiring skilled manpower, and selecting expert/professional vendor.

Nine, Training and Skill Development: About 1.2% of total IT budget goes to training purpose, which is not adequate at all. Also, in many circumstances the significance of IT peoples' training was unheeded by bank management. As seen from the study, training on 'Database' and 'DC/DRS Management' has slightly increased in 2020 compared to 2019. A point worth noting is that training on 'Digital Products and Services' has been gaining enormous popularity in last year. 54% banks were providing training for their employees in this particular topic, which is a positive sign. But training on other major areas like 'Network', 'Software' and 'IS Audit and Security' is overlooked. So, bank authority should give precise attention in these important areas and providing adequate number of quality training to their manpower for talent improvement.

Ten, Role of Bangladesh Bank: BB has been working proactively for a long period to develop the overall IT infrastructure of banking sector. Proper guidelines and monitoring of BB have also been helping the IT departments of different banks to expand in right way. As a result, expectation from BB is increasing day by day. In Table-19, bank's IT department stated their expectations from central bank to play vital role for proper execution. For the last few years banks have been demanding some important initiatives to be taken by BB, to solve some problems as follows:

1. Customer disputes in providing inter-bank fund transfer services using NPSB, RTGS, BEFTN and BACPS are increasing.
2. BB may take some initiatives (centrally tracking and monitoring system) to lessen disputes and resolve quickly, Banks have severe weakness in regular DRS testing.
3. BB may increase the frequency of effective inspection to ensure instant activation/running of whole business operation from DR site in both working day and holiday.

4. BB may form a committee with members of scheduled banks to ensure compliance of the banks by formulating a guideline for ICT development.
5. BB may review and upgrade its ICT Security Guideline in each year by the above committee to incorporate new security threat.
6. BB should take immediate steps to set up robust and reliable infrastructure for DRS at separate seismic zone for all banks.
7. BB can push the banks for achieving the standard certifications and advice the banks to allocate the budget for standardization of IT operations, effective steps may be taken by BB to ensure transparency in IT governance of banks,
8. BB may introduce a Central SOC system for overseeing all traffic of the bank in order to identify cyber threat or attack.
9. BB can arrange Cyber Sensor for all banks.
10. BB may take important role to develop adequate fund and form a consortium of all banks for developing a common robust core banking software (CBS) to reduce dependency on foreign CBS and cost. More skilled ICT audit personnel of BB may be sent for onsite supervision. They should be more equipped with penetration and vulnerability assessment tools (the best VAPT tools) and conversant with international norms and practices to get the real scenario of the banks in the ICT sector.

Eleven, Some Joint Initiatives may be Taken by both BB and BIBM: IT executives of different banks have delivered some valuable suggestions (Table-19, SL no. 12) to enhance the efficiency of IT operations. They expressed their opinion that these suggested courses of actions may be executed with the joint efforts of BB and BIBM. Some of the important suggestions are –

1. to arrange special Certification program on VA and PT, Threat Intelligence, Cyber Security Incidence Handling and Response and Forensic Investigation; arrangement of mandatory training with global certification program and advanced training by foreign experts;
2. to conduct knowledge session with decision makers; launching forum of Bank-CERT;
3. to establish separate specialized institution/academy for the development, research and consultancy in the area of innovating and automated banking/financial technology, digital transformation, cyber threat and cyber risk management.

References

Bangladesh Automated Cheque Processing System (BACPS) V 2.0 Operating Rules & Procedures, 2020

Bangladesh Bank (2021), Agent Banking Activities in Bangladesh, *Quarterly Report April-June*, 2021

Bangladesh Bank (2015), *Guideline for ICT Security for Scheduled Banks and Financial Institutions*, 2015, Dhaka, Bangladesh.

Bangladesh Bank, *Financial Stability Report*, Various Issues.

Bangladesh Bank (2021), *Monthly Economic Trends (various issues)*, February 2021.

Bangladesh Bank (2021), *https://www.bb.org.bd/aboutus/index.php*

Bangladesh Mobile Financial Service Regulations, 2018

Greenstein, Feinman, *Electronic Commerce*, UK: McGraw Hill, International Edition

Guidelines on Core Banking Solution (CBS) Features and Controls, November, 2016 Version 1.0

Guidelines on Electronic Know Your Customer (e-KYC), BFIU, Volume: 01, December, 2019

Ministry of Information (2010), *ICT Act, 2006,* Bangladesh Government, Dhaka

Prudential Guidelines for Agent Banking Operation in Bangladesh, 2017

Quarterly Review Report on Green Banking Activities of Banks & Financial Institutions and Green Refinance Activities of Bangladesh Bank, April-June, 2020

Shirin A.K. (2011), *Information Technology in Financial Services*, 1st Edition, 2011, Tithy Printing & Packaging, Dhaka, Bangladesh.

Uddin M. S., M. R. Alam, K. Rabbi, F. Hasan, S. M. Tofayel, S. Islam (2020), “IT Vulnerability Assessment and Penetration Testing in Banks”, *Banking Research Series*, BIBM, Dhaka, Bangladesh.

www.bb.org.bd/pub/publictn.php#, (MFS) Comparative Summary Statement

www.bb.org.bd/fnansys/paymentsys/mfsdata.php, Bangladesh Bank Open Data Initiative

www.bb.org.bd/econdata/index.php

www.mckinsey.com/industries/financial-services/our-insights/banking-matters/next-generation-core-banking-platforms-a-golden-ticket

www.protiviti.com/US-en/insights/modernizing-legacy-systems-financial-institutions

Appendix-1: List of Respondent Banks

1.	AB Bank Limited	2.	Janata Bank Limited
3.	One Bank Limited	4.	BRAC Bank Limited
5.	Sonali Bank Limited	6.	Eastern Bank Limited
7.	National Bank Limited	8.	Dutch Bangla Bank Limited
9.	Islami Bank Bangladesh Limited	10.	NCC Bank Limited
11.	Trust Bank Limited	12.	Exim Bank Limited
13.	Global Islami Bank Limited	14.	State Bank of India
15.	United Commercial Bank Limited	16.	Mutual Trust Bank Limited
17.	Bangladesh Development Bank Limited	18.	Bank Asia Limited
19.	Uttara Bank Limited	20.	Dhaka Bank Limited
21.	Bangladesh Krishi Bank	22.	First Security Islami Bank Limited
23.	NRB Bank Limited	24.	WOORI Bank
25.	Rajshahi Krishi Unnayan Bank	26.	BASIC Bank Limited
27.	Bangladesh Commerce Bank Limited	28.	Prime Bank Limited
29.	Meghna Bank Limited	30.	Al Arafah Islami Bank Limited

Paper Four

TRADE SERVICES OPERATIONS OF BANKS

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List of Abbreviation

ACC	Anti-Corruption Commission
ACU	Asian Clearing Union
AD	Authorized Dealer
ADB	Asian Development Bank
AML	Anti-Money Laundering
AMLD	Anti-Money Laundering Department
APG	Asia Pacific Group
ASYCUDA	Automated System for Customs Data
AWB	Air Waybill
B/E	Bill of Entry
BB	Bangladesh Bank
BC	Bills for Collection
BCWMA	Bangladesh Ceramic Wares Manufacturers Association
BDT	Bangladesh Taka
BEFTN	Bangladesh Electronic Fund Transfer Network
BEPZA	Bangladesh Export Processing Zones Authority
BERC	Bangladesh Energy Regulatory Commission
BFIU	Bangladesh Financial Intelligence Unit
BGAPMEA	Bangladesh Garment's Accessories & Packaging Manufacturers & Exporters Association
BGMEA	Bangladesh Garment Manufacturers & Exporters Association
BIBM	Bangladesh Institute of Bank Management
BIN	Business Identification Number
BKMEA	Bangladesh Knitwear Manufacturers & Exporters Association
BOE	Bill of Exchange
BPO	Bank Payment Obligation
BPGMEA	Bangladesh Plastic Goods Manufacturers & Exporters Association
BTMA	Bangladesh Textile Mills Association
C&F	Clearing and Forwarding
CAMS	Certified Anti money Laundering Specialists
CCI&E	Chief Controller of Import and Export
CD	Current Deposit
CDCS	Certified Documentary Credit Specialist
CFR	Cost and Freight
CFT	Combating the Financing of Terrorism
CGFS	Committee on the Global Financial System

CIB	Credit Information Bureau
CIF	Cost, Insurance and Freight
CIP	Carriage and Insurance Paid To
CISG	Contract for the International Sale of Goods
CITF	Certificate in International Trade and Finance
CITF	Certificate in International al Trade and Finance
COTIF	Convention concerning International Carriage by Rail
CPT	Carriage Paid To
CSDG	Certificate for Specialists in Demand Guarantee
CY	Calendar Year
DA	Documents Against Acceptance
DAP	Delivered at Place
DAT	Delivered at Terminal
DBI	Department of Banking Inspection
DDP	Delivered Duty Paid
DOCDEX	Documentary Instruments Dispute Resolution Expertise
DOS	Department of Offsite Supervision
DP	Documents Against Payment
EDF	Export Development Fund
EPZ	Export Processing Zones
ERC	Export Registration Certificate
ERQ	Exporters Retention Quota
EXP Form	Export Form
EXW	EX Works
EZ	Economic Zones
FAS	Free Alongside Ship
FATF	Financial Action Task Force
FC	Foreign Currency
FCA	Free Carrier
FCB	Foreign Commercial Bank
FDBP	Foreign Documentary Bill Purchase
FE	Foreign Exchange
FEOD	Foreign Exchange Operation Department
FEPD	Foreign Exchange Policy Department
FERA	Foreign Exchange Regulation Act
FIT	Finance of International Trade
FIT	Finance of International Trade
FOB	Free on Board

GFET	Guidelines for Foreign Exchange Transactions
ICC	International Chamber of Commerce
ICC	Institute Cargo Clauses
IDA	International Development Association
IFC	International Finance Corporation
IFA	International Forfeiting Association
IMP Form	Import Form
IRC	Import Registration Certificate
ISBP	International Standard Banking Practice
ISP	International Standby Practices
ITC	International Trade Center
KYC	Know Your Customer
LC	Letter of Credit
LCAF	Letter of Credit Authorization Form
LDBP	Local Documentary Bill Purchase
LFMEAB	Leather goods & Footwear Manufacturers & Exporters Association of Bangladesh
LIM	Loan Against Imported Merchandise
LTR	Loan Against Trust Receipt
MFI	Microfinance Institution
MLPA	Money Laundering Prevention Act
MOF	Ministry of Finance
MNC	Multinational Corporations
MT	Message Type
NBR	National Board of Revenue
NFCD	Non-Resident Foreign Currency Deposit
NVOCC	Non-Vessel Operating Common Carrier
OBU	Offshore Banking Unit
OD	On Demand
PAD	Payment Against Documents
PCB	Private Commercial Bank
PI	Pro-forma Invoice
PRC	Proceed Realization Certificate
PSI	Pre Shipment Inspection
PwC	Price water house Coopers
RFCD	Resident Foreign Currency Deposit
RIT	Rationalize Input Template
RMG	Ready Made Garments
RRI	Road Rail and Inland Waterway

SCB	State Controlled Bank
SCF	Supply Chain Finance
SME	Small and Medium Enterprise
SOD	Secured Overdraft
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TBML	Trade Based Money Laundering
TIN	Tax Identification Number
TM	Travel and Miscellaneous
TTI	Total Tax Incident
UAE	United Arab Emirates
UCPDC	Uniform Customs and Practice for Documentary Credit
UK	United Kingdom
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNSCR	United Nations Security Council Resolution
UPAS LC	Usance Pay at Sight Letter of Credit
URC	Uniform Rules for Collection
URDG	Uniform Rules for Demand Guarantee
URF	Uniform Rules for Forfeiting
URR	Uniform Rules for Bank to Bank Reimbursements under Documentary Credits
VAT	Value Added Tax
WTO	World Trade Organization

Trade Services Operations by Banks

1. Introduction

1.1: Background

Multiple waves of Covid-19 devastation have been continuing with uncertainties in international trade transactions throughout the globe and trading countries are still struggling to recover from the drastic fall in the export-import transactions. During the whole year of 2020, merchandise trade was declined by 5.3 percent- smaller than the 9.2 percent decline foreseen in the WTO's forecast in October 2020. Vaccination contributed to attaining this relatively smaller decline in global trade performance towards the end of 2020, and despite uncertainties, the first quarter of 2021 registered positive growth in merchandise trade volumes.

It is recognized that trends and changes in trade volumes and transactions have direct associations with trade services by banks that mainly consist of trade payment, trade financing, and some other associated services to the traders like document handling and support in managing risks of various types.

In responses to the challenges, the key stakeholders of international trade services are passing through a process of financial services transformation by adopting sophisticated technologies, embracing new loan products, enforcing new regulations, and undertaking fresher risks. Especially, the digitization efforts and changing compliance requirements of banks are contributing to the changing structure of trade services offered by banks. The evolving situation brought greater complexities to the relatively small trade enterprises that have traditionally been struggling with the trade-finance gap.

This study is an effort to produce authentic data on the trends, processes, and operations of the activities of the trade services departments of banks that are associated with improving service quality and effectiveness of trade services by banks of the country.

1.2: Objectives and Methodological Issues

The study broadly attempts to review the overall activities and operations of the trade services by banks for the year 2020, and examine the implications of Covid-19 for the trade services activities in recent months of 2021. More specifically, the key objectives are: ***one,*** to discuss the changes in functional areas of trade service operations of banks for the year CY 2020 and CY 2021 (Jan- July); ***two***, to discuss the regulatory enviroment, trends and operational aspects of trade services by banks in Bangladesh; and ***three,*** to identify future course of actions for strengthening trade services by banks in Bangladesh.

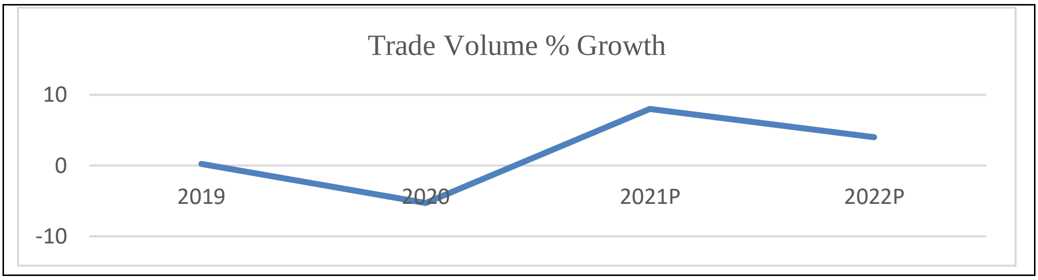
The review study is based on both primary and secondary information. Publications and reports on trade payments and financing are the secondary sources. BB data were extensively used. ICC documents, global trade-related reports on trade and trade services were the major secondary data sources. A questionnaire survey was conducted to collect primary data that incorporated both open-ended and close-ended questions. The survey was administered in thirty-six (36) banks. Sample banks include four SCBs, thirty PCBs of different generations, and two FCBs (appendix table 3). Two Focus Group Discussion (FGD) were conducted with the thirty-six representatives of different banks for data validation and drawing opinions on challenges and future course of actions (list of participants attached as appendix-4).

2. Changing Trade and Trade Services Markets, and Challenges: Global Context

2.1 Changing International Trade Scenario

Optimism on the prospects for a rapid recovery in world trade contained a boost in volume of merchandise trade which recorded a strong 15 percent increase in the first quarter of 2021 over the previous year that led by Asia with export growth of 28%; and the volume increased by 2.3% in the first quarter of 2021 over the previous quarter driven by the 7.8% merchandise exports in Asia (WTO, 2021). According to an estimate from the WTO, the volume of world merchandise trade is expected to increase by 8.0% in 2021. Trends for 2020 and 2021 clearly reveal massive downturns and fluctuations in response to the multiple waves of Covid-19 and the associated economic and logistic challenges (Table 2.1).

Table 2.1: Growth Trends in International Trade



	Year-on-year growth, %							
	Exports				Imports			
	2020Q2	2020Q3	2020Q4	2021Q1	2020Q2	2020Q3	2020Q4	2021Q1
World	-21	-4	3	16	-21	-6	2	14
North America	-32	-11	-36	4	-23	-7	3	11
South & Central America	-19	-9	-3	13	-26	-23	-2	13
Europe	-23	-3	5	13	-22	-3	5	11
Asia	-10	2	9	28	-17	-6	1	19
Other	-39	-21	-16	8	-23	-11	-5	8
	Quarter-on-quarter growth, %							
	Exports				Imports			
	2020Q2	2020Q3	2020Q4	2021Q1	2020Q2	2020Q3	2020Q4	2021Q1
World	-12.8	13.8	4.3	2.3	-11.1	10.3	5.4	2.2
North America	-24.5	22.4	5.5	0.1	-14.1	16.2	5.4	2.3
South & Central America	-6.1	4.3	0.1	0.2	-12.5	0.2	17.3	7
Europe	-17.9	18.8	4.9	-0.3	-15.4	16	4.5	-1.6
Asia	-4	10.4	4.5	7.8	-4.4	3.3	5.4	6.2
Other	-7.6	0.9	0.0	-6.4	-10.9	4.8	5	1.9
Source WTO- UNCTAD, 2021								

2.2 Trade Services/Finance Products and Market Trends in the Global Context

Data on the exact volume of trade financing products lack accuracy, however, still traditional trade financing products (TFP) have complete dominance in the market. According to the ICC (2020), majority of the respondents (52%) indicate that SCF constitutes only 0-5% of their trade finance made available today, however, there are evidence that the popularity of the SCF is growing amongst the traders. Of the different supply chain products, currently, receivables discounting (71%) is seen as the most in-demand supply chain technique from a client perspective, followed by payables finance (54%), loans/advances against receivables (46%), and factoring (45%). About 35% of respondents believe that the proportion of their SCF would be 0-15% in 2025; whereas 38% have expectations that their figures would be somewhere 15-30% of the total trade finance; and 10% have expectations that their SCF would cross 50% of the total by 2025; and (ICC, 2020). Despite growing popularity of SCF, the projections indicate possible dominance of TFPs even in near future.

LC remained the most widely used trade financing product, and Asia-Pacific region continued to register much higher volumes of MT 700 both in export and import. Countries using SWIFT LCs the most for imports were: Bangladesh, South Korea, China, India and Pakistan; and the countries using SWIFT LCs the most for exports were: China, Bangladesh, India, Hong Kong and Singapore (ICC, 2020).

Digitization efforts are obvious in the context of the Covid-19 to shield against pandemic driven disruptions in the trade finance industry, and it is widely believed that when accomplished, the benefits of digitisation are numerous. According to a survey outcome of mid-2020, 66 percent of respondents expect at least 10 percent in cost savings from digitisation over the next five years (Bischof, 2020). The survey also observed, digitisation can also enhance quality of customer services and ensure superior risk mitigation benefits that could improve the future of trade finance, which means with banks that can implement digital solutions would be able to control higher market share and significant competitive advantage. The global trade finance gap is estimated to grow to USD 2.4 trillion by 2025 (Asian Development Bank estimate). But this gap could be reduced by USD1 trillion if Digital Ledger Technology is used more broadly (mordorintelliegence.com).

Environmental, social and governance (ESG) issues in trade finance received renewed focus in the context of the Covid-19 crisis (ICC, 2020).

2.3 Challenges in Global Trade Services Market

Huge Surge in Freight Charge: The impact on freight rates has been greatest on trade routes to developing regions, where consumers and businesses can do least afford. For example, by early 2021, freight rates from China to South America jumped 443%, and 63% on the route between Asia and North America’s eastern coast (unctad.org) .

Trade Based Money Laundering Reshaped: In the Covid-19 incident, TBML took on various forms. According to reports from FATF members, observers, and open sources, criminals have attempted to benefit from the Covid-19 outbreak by increasing fraudulent international trade activities (FATF, 2020). During a combined enforcement operation by the WCO, Interpol, Europol, customs administrations, police forces, and other law enforcement agencies, seizures of counterfeit and unlicensed face masks and hand sanitizers increased significantly (WCO, 2020). In March 2021, FATF and Egmont Group published a new paper titled "Trade Based Money Laundering-Risk Indicators."

High and Growing Regulation and compliance requirements and Capacity Divide: According to the ICC (2020) poll, 56 percent of respondents said that understanding and implementing compliance procedures, as well as capital and regulatory requirements, were major concerns for their banks. While banks have a lot in common when it came to capital and regulatory requirements, there was a bigger split in terms of compliance between different types of banks.

Digital Divide: While digitization is widely seen as very important, a survey by the Global Trade Finance (2020) shows a clear divide between banks that have the vision, capacity and commitment: "While 83% of global banks have a digital strategy, only 46% of local banks have it; only 17% of respondents have successfully implemented digital solutions, with a surprising fact that one in five not yet seeing any tangible benefits; 22% of banks said that they have tried to implement technology solutions but that it has been imperfect, while a further 19% are currently struggling to even match that". The survey also finds, "the volume of zero-touch trade finance processing remains limited: import and export LC 7-8%; export-import loans-9%; performance guarantee 6%".

Inadequacy of the Supportive Regulation for Tarde Digitization: According to the ICC study (2020), in the context of trade financing, over half of respondents stated that paper-based documentation was no longer required; while there is evidence that local legislation and procedures remain a barrier to paperless trade in certain instances (ICC, 2020). The challenge of regulatory impediments to growth is highlighted in a Finastra study (2020) of over 700 financial institutions and banks around the world; nearly half of the respondents say rules are holding back innovation (Trade Finance Global, 2020).

3. Regulatory Environment and Trade Facilitation through Banks in Bangladesh

3.1 A brief Review of Regulatory Environment of Trade Services in Bangladesh

Alike other global economies, trade services activities of Bangaldesh are guided both by the domestic and international regulations. Foreign Exchange Regulations (Amendment) Act 1947 (FERA 1947) is the most important domestic act for controlling and supervising international banking and foreign exchange transactions that mainly include trade payment and financing. In addition to that export and import policies, issued from the Ministry of Commerce, are relvent guidelines/rules for the banks and traders. Several United Nations (UN) guiding documents and International Chamber of Commerce (ICC) publications are adopted to facilitate trade services globally (Table 3.1).

Table 3.1: Major Regulations/Guidelines relevant to International Trade Services in Bangladesh
Domestic Sets of Rules/Act • FERA 1947 (Foreign Exchange Regulation Act 1947) • Import Policy Order 2021-24 • Export Policy 2018-21
International Sets of Rules/Guidance • UCP 600 (Uniform Customs and Practice for Documentary Credit) • ISBP 745 (International Standard Banking Practice) • URR 725 (Uniform Rules for Bank to Bank Reimbursement under Documentary Credits) • URC 522 (Unifrom Rules for Collection) • Incoterms 2020 (International Commercial Terms) • URDG 758 (Uniform Rules for Demand Guarantee) • ISP 98 (International Standby Practice) • GRIF (General Rules for International Factoring) • URF 800 (Uniform Rules for Forfaiting) • International Standard Demand Guarantee Practices (ISDGP 215).

Foreign Exchange (FE) circulars are issued empowered by the FERA 1947, and these circulars are compiled with the title Bangladesh Bank Guidelines on Foreign Exchange Transactions (GFET) to be followed by the authorized dealers (ADs). During January 2020-July 2021, eighty (80) FE circulars/circular letters were issued (summarized in appendix table-2). A number of these circulars are issued as part of the central bank's effort to handle Covid-19 related challenges. Selected key circulars of FEPD and relevant circular of BRPD and their existing and potential implications are narrated in the following table (Table 3.2).

Table 3.2: Major Circulars Associated with Trade Financing during January 2020- July 2021

Safeguard of Export Trade transaction (FE 25, July 13, 2021): To safeguard export trade facilitation, this circular reiterates the position of 'foreign Exchange Risk Management' and BFIU guidelines of the 'Presentation of Trade based Money Laundering' that AD dealers must not engage with 'Shell Bank' in their day to day export trade transactions. This circular emphasizes the number of banks involved in export trade transactions under different trade payment methods and urges ADs to ensure appropriate due diligence before involving any banks to avoid 'Shell Bank'. This circular also advised ADs to ensure that the courter party foreign bank will accept/receive export documents beforehand, even though there is no established correspondent banking relationship between the AD and foreign counterparty bank.

Post Import Financing (BRPD-12, June 13, 2021): Bangladesh Bank formulated a detailed policy guideline on Post Import Financing (PIF) for strengthening the monitoring and supervision of the total classified loans that have come from short-term financing. LCs will be established complying with the guidelines of ICRRS and other related instructions. For PIF approval, there should be a specific board approved policy. No new PIF facility will be given to a client who has overdue PIF. PIF facility is not available in case of sale/purchase between allied or sister concerns and local LCs. A PIF monitoring unit will be established to monitor LC opening, loan sanction, disbursement under PIF, loan recovery. This might be very supportive in ensuring sound post import financing practices and handling associated malpractices.

Open Account Transaction Supported by Undertakings (FE-25: June 30, 2020): Exports shall be executed against payment undertaking/payment risk coverage for settlement of export bills/receivables within the permissible statutory period by international companies/foreign banks/ Foreign Financial Institutions / trade financiers/ insurance entities arranged in association with importers and /or exporters.

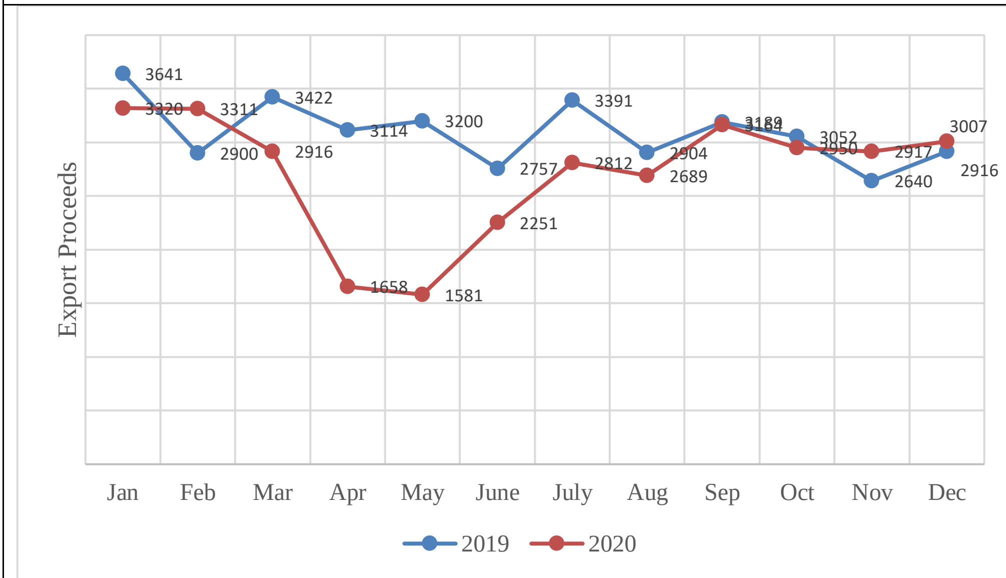
Relaxation of Foreign Exchange Regulations for Trade transactions – Extended facilities (Several FE Circulars during 2020 and 2021): Due to Covid-19 pandemic, the deadline for repatriation of export proceeds has been extended to 210 days. This has been extended to December 31, 2021 as most of the contract based trade payment has been deferred from DP to DA to avoid the overdue loans and avail the cash incentive of the exporter as well as to increase operational efficiency. Failure of any entity to repatriate export proceeds on time would not only impact its loan classification but also create hindrance to acquiring loans for further consignments. In addition, the tenure of submission of bill of entry has been extended up to 60 days, up to December 31, 2021.

Compliance with the guidance and circulars of the Bangladesh Financial Intelligence Units (BFIU) is becoming relevant to handling money laundering and terrorist financing through trade services by banks. In December 2019, BFIU issued specific guidelines for banks to prevent TBML. Due to Covid-19 situations, BFIU extended the timeline for full implementation from June 2021 (BFIU Circular Letter, March 2021). Considering the huge illicit outflow of funds through trade transactions, BFIU issued a guideline for commercial banks operating in Bangladesh. To make it user friendly, this guideline annexed 19 case studies with identified TBML alerts, 48 TBML alerts with illustrations, trade product wise TBML alerts, sample of trade transaction profile, list of landlocked countries, sanctioned vessels etc. It is expected that with the full implementation of this guideline, TBML will be significantly reduced in the future in Bangladesh. For managing risk, the guideline prescribed four levels of risk assessment i.e. Infrastructure Level Risk Assessment, Customer Level Risk Assessment, Transaction Level Risk Assessment and Enterprise Level Risk Assessment. It also suggests the required control mechanisms to mitigate the identified risk. BFIU also issued a comprehensive directives and guidelines to be followed by the banks to handle money laundering and terrorist financing in June 2020 (BFIU Circular 26).

3.2. Trade Facilitation through Banks during CY 2019 and CY2020 in Bangladesh

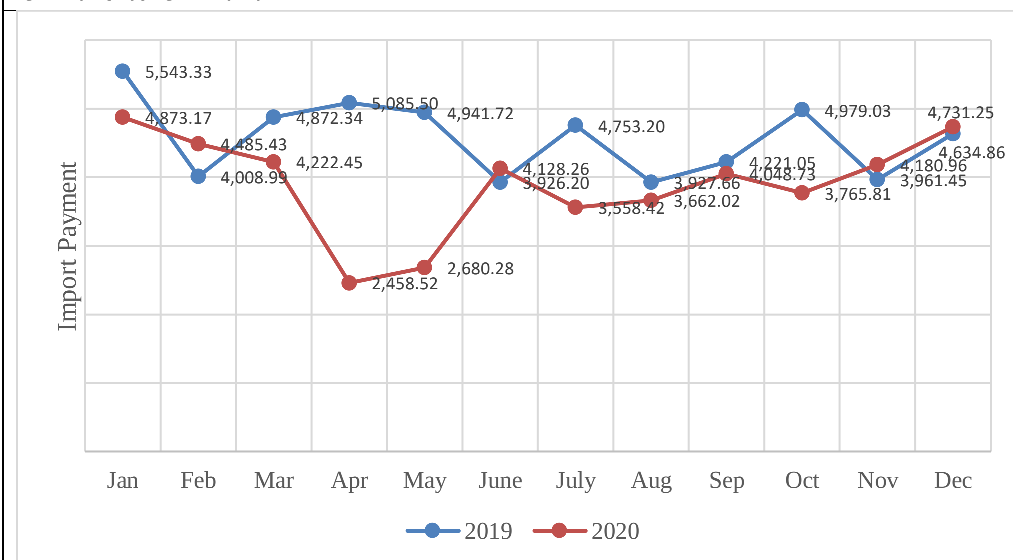
Import payments and export proceeds declined by 14% and 12% respectively between CY2019 and CY2020 because of the economic, cross-border trade and trade logistic disruption in response to the Covid-19 crisis. Remittance flows (by over 20%) and wage earners inflows (by 13%) however increased in between the year. Bangladesh experienced continuous growth in both exports and imports over the years, however, the figures for export proceeds/import payments of 2020 were struggling to match the export proceeds/import payments of 2019 (Figures- 3.1 and 3.2). Especially, trade flows (exports/imports) were greatly affected during April-May, 2020 in response to the sudden up-rise of Covid-19 cases in the country. Wage-earners (Appendix Table -1) and remittance inflows (Appendix Table-2), were in reasonably good shape mainly in the second half of the CY2020 when remittance outflows also increased (Appendix Table-3).

Figure 3.1: Month Wise Comparison of Export Proceeds for CY2019-2020 [million USD]



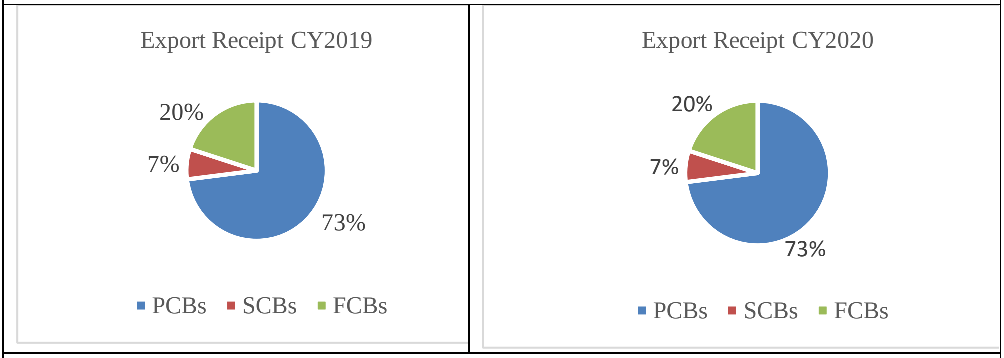
Source: BB, 2021

Figure 3.2:Month Wise Comparison of Import Payment in Million USD for CY2019 to CY 2020



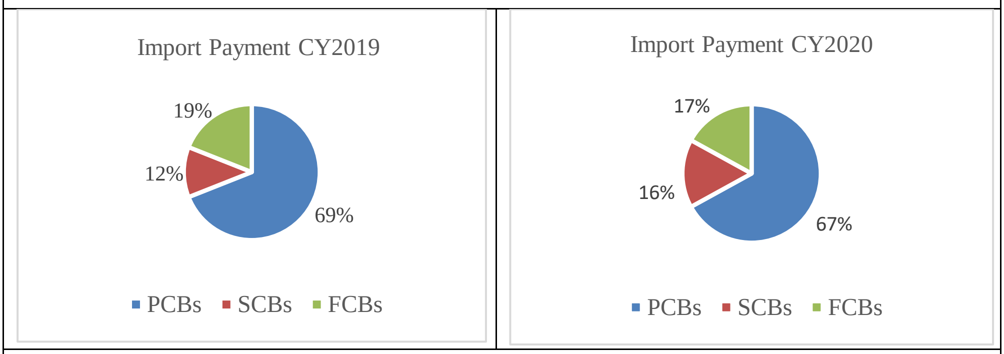
Source: BB, 2021

Figure 3.3 : Export Receipts through Bank Groups during CY 2019 & CY2020



Source: Authors' Calculation Based on BB Data (2021)

Figure 3.4: Import Payment through Bank Groups during CY 2019 & CY2020



Source: Authors' Calculation Based on BB Data (2021)

Dominance of PCBs in the trade facilitation remained constant as of end of CY 2020, which is not very different from that of end of CY2019 (Figures 3.3 and 3.4). Regarding the performance of individual banks in facilitating import and export payment and receipt, a few PCBs and FCBs showed better performances. In import payment, Agrani Bank Ltd has entered in top five in CY19 (Sonali Bank Ltd is out of the top five) and maintained the position in CY2020; and in terms of receiving export proceeds, Islami Bank Bangladesh Ltd was a new member of top five for CY2019, however, Exim Bank regained its place in CY 2020 (Table 3.3 and Table 3.4).

Table 3.3: Top Five Export Earnings Facilitating Banks [in Million USD]			
Name of the Bank	**CY2019**	**CY2020**	**Name of the Bank**
HSBC Ltd	4029	2897	HSBC
Standard Chartered Bank	4022	2184	Standard Chartered Bank
United Commercial Bank Ltd.	3619	1929	United Commercial Bank Ltd.
South East Bank Ltd.	2801	1700	South East Bank Ltd.
Islami Bank Bangladesh Ltd.	2322	1558	EXIM Bank Ltd.
Source: Authors' Calculation Based on BB Data (2021)			

Table 3.4: Top Five Import Payment Facilitating Banks [in Million USD]			
Name of the Bank	**CY2019**	**CY2020**	**Name of the Bank**
Standard Chartered Bank	4029	3682	IBBL
HSBC	4022	3382	HSBC
IBBL	3619	3179	Standard Chartered Bank
Agrani Bank Limited	2801	2027	Agrani Bank Limited
South East Bank Ltd.	2322	1927	South East Bank Ltd.
Source: Authors' Calculation Based on BB Data (2021)			

In contrast to the projection, wage earners' remittance inflows showed remarkable resilience. The recovery and increase in the volume of wage earners' remittances also reflected in the individual banks' performance. PCBs dominate this service market with over 70% market share (Appendix Figure 4). IBBL, Agrani, and DBBL maintained their top positions in facilitating wage earners remittance inflows during CY2019 and CY2020 (Table 3.5).

Table 3.5: Top Five Wage Earners Remittance Facilitating Banks [in Million USD]			
Name of the Bank	**CY2019**	**CY2020**	**Name of the Bank**
Islami Bank Bangladesh Ltd.	3,895	6342	Islami Bank Bangladesh Ltd.
Agrani Bank Limited	2,033	2477	Agrani Bank Limited
Dutch-Bangla Bank Ltd.	1,934	2020	Dutch-Bangla Bank Ltd.
Sonali Bank Limited	1,299	1437	Sonali Bank Limited
Janata Bank Limited	914	920	Janata Bank Limited
Source: Authors' Calculation Based on BB Data (2021)			

Remittance inflows (FDI, inflows out of investment, service exports etc.) and outflows increased by 8.5% and 2% between July 2019 and July 2020 respectively. FCBs dominate this service market with 65% in case of inflows and 56% in case of outflows (Appendix Figures 5 and 6). The City Bank, Standard Chartered Bank, HSBC, Eastern Bank, IBBL, UCBL and Agrani were amongst the top five in inward and outward remittance services (Tables 3.6 and 3.7).

Table 3.6: Top Five Inward Remittance Facilitating Banks [in Million USD]

Name of the Bank	CY2019	CY2020	Name of the Bank
Standard Chartered Bank	3774	4231	The City Bank Ltd.
The City Bank Ltd.	2416	3439	Standard Chartered Bank
Eastern Bank Ltd.	1326	2126	Islami Bank Bangladesh Ltd.
United Commercial Bank Ltd.	1119	1973	HSBC
South East Bank Ltd.	1023	1272	Eastern Bank Ltd.

Source: Authors' Calculation Based on BB Data (2021)

Table 3.7: Top Five Outward Remittance Facilitating Banks [in Million USD]

Name of the Bank	CY2019	CY2020	Name of the Bank
Standard Chartered Bank	2995	4711	HSBC
The City Bank Ltd.	2846	3816	The City Bank Ltd.
Eastern Bank Ltd.	2333	3388	Standard Chartered Bank
Agrani Bank Limited	1719	2682	Islami Bank Bangladesh Ltd.
United Commercial Bank Ltd	1141	1326	Agrani Bank Limited

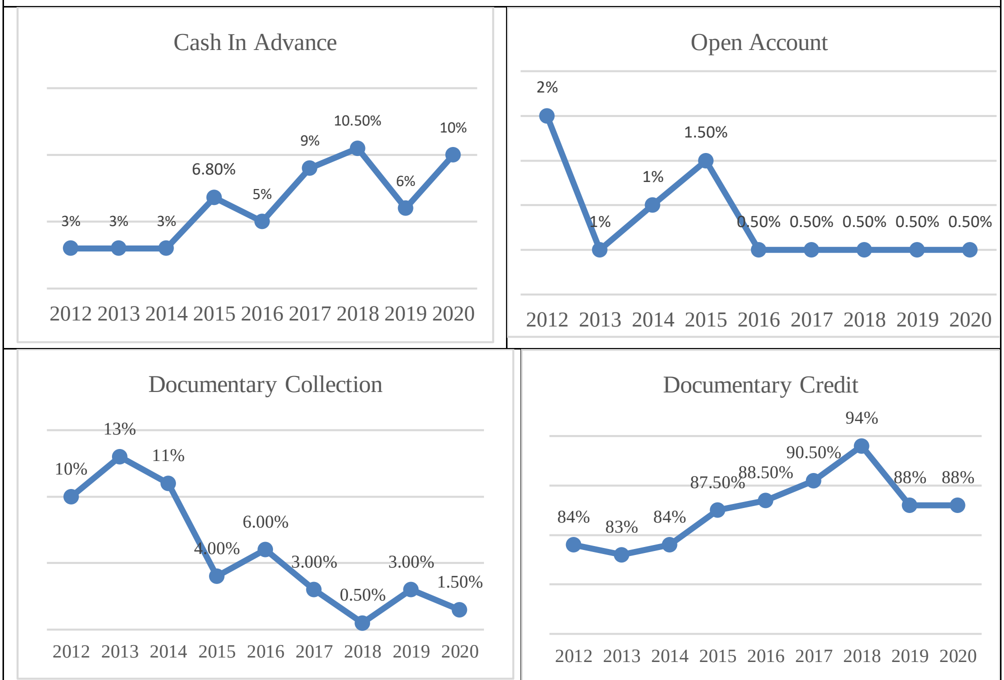
Source: Authors' Calculation Based on BB Data (2021)

4. Trade Payment-Financing Products and the associated Operational Procedures

4.1 Payment Services in Export and Import Transactions by Banks

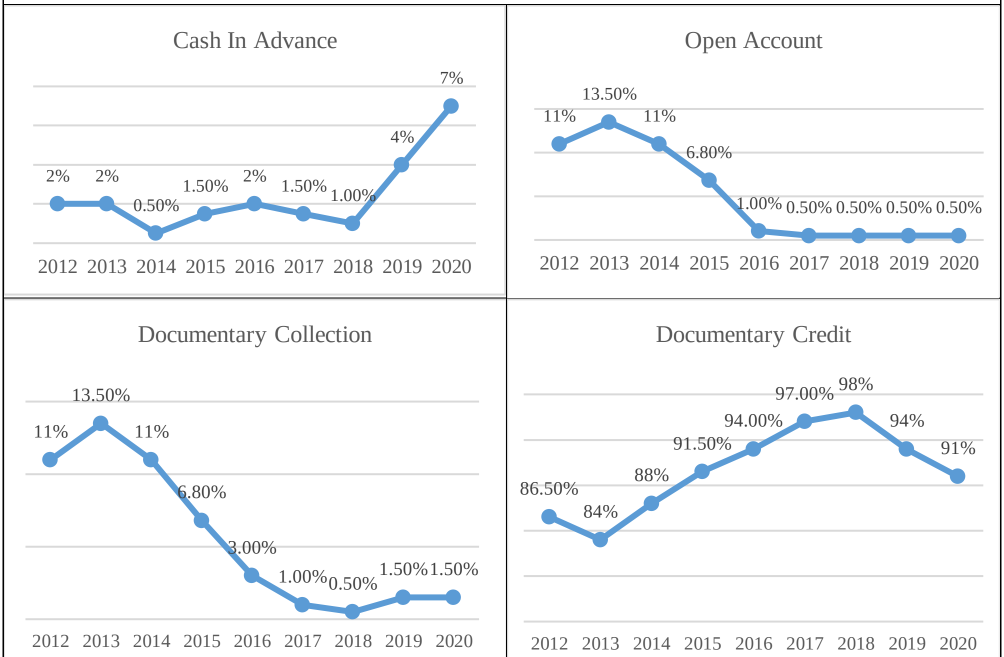
Extensive use of documentary credit is reflected in the survey data both in terms of number and volumes over 2012-2020 (Figure-4.1 and 4.2). This is not consistent with the bigger section of developed economies where most payment transactions take place through open account. Deference in terms of number and volume logically indicates the use of bigger size imports through LC. Marginal decrease in documentary collection in importation may be explained by the increase in cash in advance in the context of Covid-19 crisis. The increase in cash in advance in 2020 was mostly due to a lack of sourcing countries for raw materials and an increase in advance payment limit to USD 5 lacs in importing Covid-19 pandemic-related life-saving medications, equipment, and other items. Of the different categories of banks, FCBs' documentary collection holds a significant portion because most MNCs operating in the country maintain trade transactions with FCBs where MNCs work with their parent companies. A few PCBs are also added to the list in recent times.

Figure 4.1: Payment Methods for Imports [Number] in Percentage during CY2012-2020



Source: Survey Data (2021)

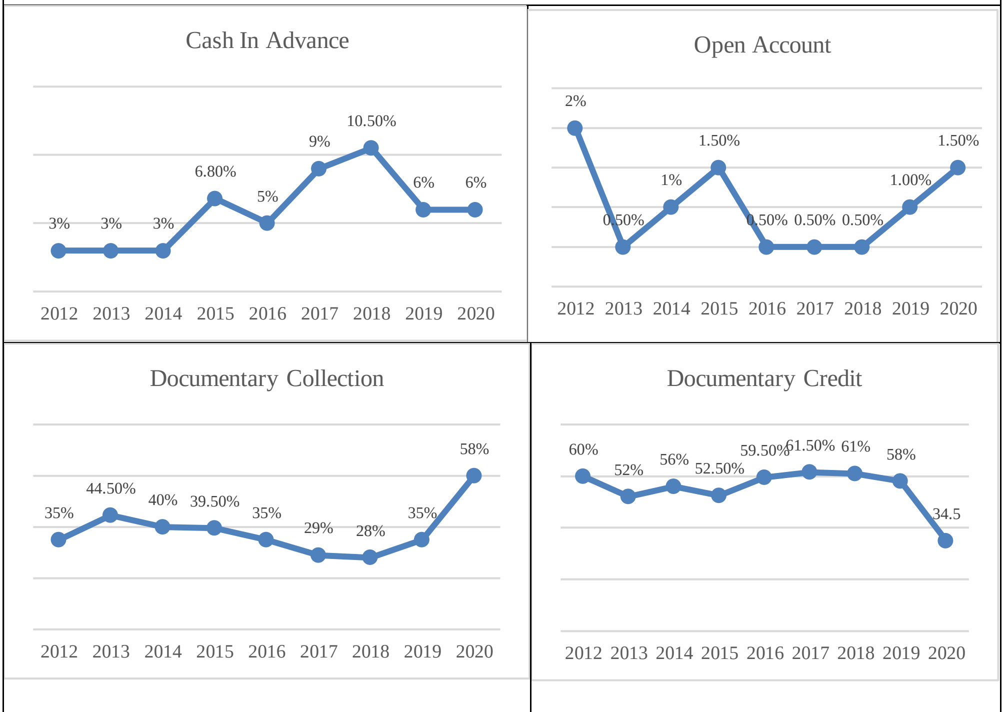
Figure: 4.2 Payment Method for Imports [Volume] in Percentage during CY2012-2020



Source: Survey Data (2021)

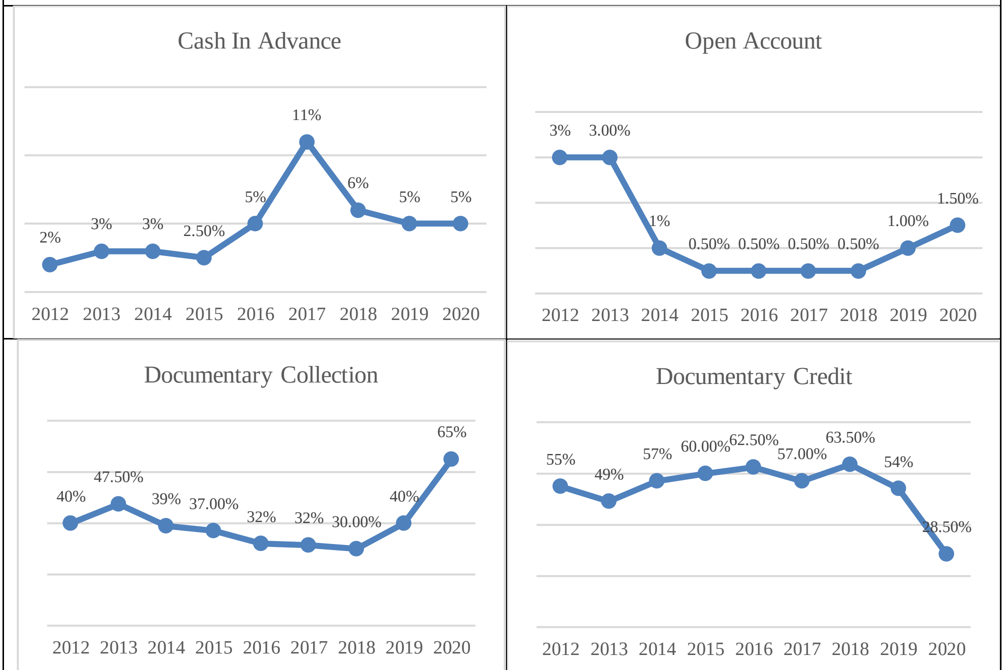
Notable shift took place in exportation when documentary collection became the most dominant trade payment method in CY2020 both in terms of number and volumes (Table 4.3 and 4.4). Foreign buyers were not found to be interested in offering LC in this unprecedented period of economic and trade disruption. More specifically, significant increase in documentary collection in 2020 can be linked to international reputable customers' approach who previously issued LCs for some exporters switching to export contracts during the epidemic. Cost of importation also became a critical issue when freight charges surged abnormally. Use of LC declined to 35% (in number) and 29% (in volume) in CY 2020. In receiving export earnings, use of documentary collection in FCBs is higher than that of documentary credits as compared to PCBs and SCBs. FCBs are akin to globally reputed buyers where they prefer documentary collection to documentary credit to reduce transaction costs.

Figure 4.3: Payment Methods for Exports (Number) in Percentage during CY2012-2020



Source: Survey Data (2021)

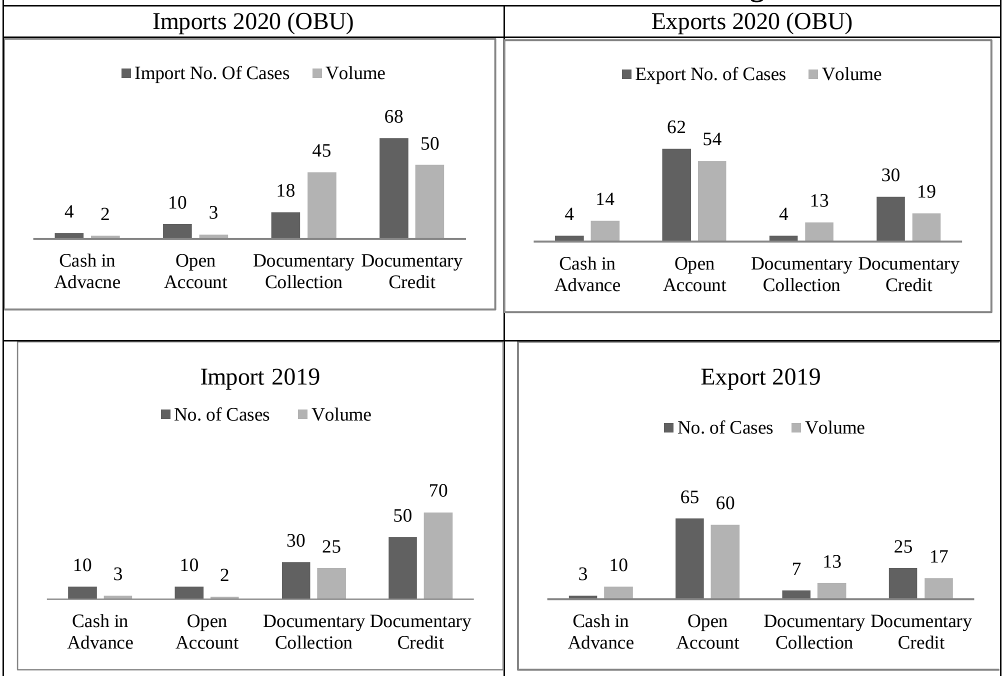
Figure 4.4: Payment Methods for Exports (Volume) in percentage during CY2012-2020



Source: Survey Data (2021)

In the EPZs, documentary collection and open account have been dominant both for exportation and importation. Similar to that of the national trade payment figures, use of LC declined with the increase in the use of documentary collection both in exportation and importation facilitated by the Offshore Banking Units (OBUs) of banks (Figure 4.5). This market has compressively been dominated by the multinational banks like Standard Chartered and HSBC in Bangladesh.

Figure 4.5: Payment Facilitation by the OBUs during CY2020
[Number of Cases and Volume in Percentage]



Source: Survey Data (2021)

Documentary credits are particularly used/popular in the importation of edible oil, wheat, pulses, oilseeds, and dairy products. However, in exportation (RMG, Jute goods, Leather, and Fish & Shrimp), documentary collection and cash in advance were also used that increased during pandemic. There are some tendencies of using cash in advance in Jute exports in the context of some specific countries (Table 4.1). The widespread usage of letters of credit/cash in advance in the jute industry is mostly due to a lack of reliable foreign purchasers. LC remained popular also in the leather sector.

Table 4.1: Payment Methods in Different Export Sectors during CY 2018-CY 2019 (Percentage in Number)

Payment Methods	RMG (Knitwear)			Jute Goods			Leather			Fish & Shrimp		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Payment in Advance	10	11	9	40	35	20	1	1	8	10	15	45
Open Account	0	0	1	0	0	0	0	0	0	0	0	0
Documentary Collection	50	55	62	30	25	30	40	30	2	30	35	35
Documentary Credit	40	34	28	30	40	50	60	69	90	60	50	20

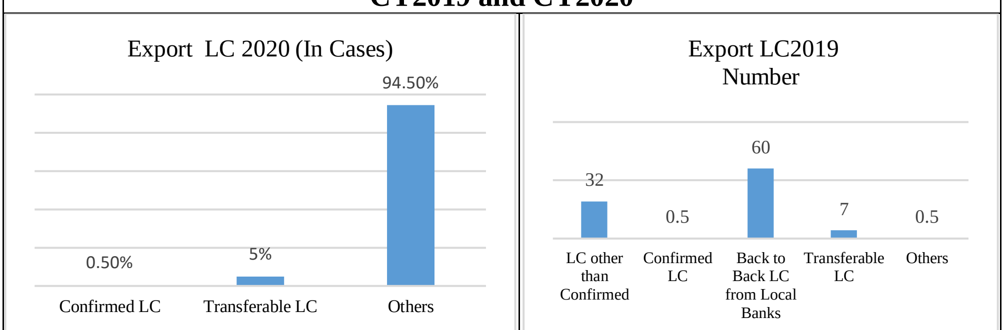
Source: Survey Data (2021)

Covid-19 trade disruption brought in notable changes in the trade payment facilitation by banks throughout CY 2020. Issuance of deferred LCs has increased considerably during the pandemic because of the BB's policy relaxation to enhance usance period of LC (Habib et.al, 2020a). On the export side, due to lower interest rate and maturity extension of repayment duration in the Export Development Fund (EDF), demand for opening EDF LCs has gone up considerably (Habib, et. al, 2020c).

4.2: Use of Documentary Credit Types

Of the special types of LC, greater use of transferable LC in Bangladesh may be explained by the presence of a number of buying houses. Besides, the practice of subcontracting by the garments manufacturers is also very common for which an LC is transferred. The category 'others' for the CY 2020 includes all other irrevocable LCs received by the exporters of the country (Figure 4.6).

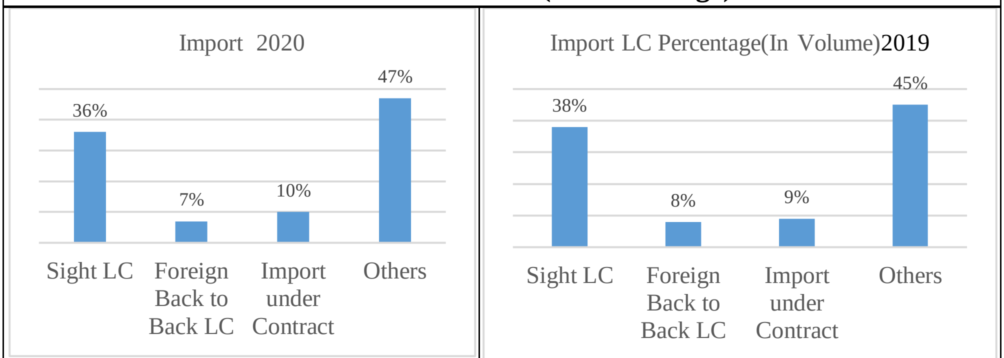
Figure 4.6: Types of Export LCs Received by Banks during CY2019 and CY2020



Source: Survey Data (2021)

Traditionally, LCs have been irrevocable in Bangladesh (though till 2007 UCP permits revocable LC as well). Back-to-back LC has been particularly popular because the country's RMG sector needs to imports/procure raw materials from home and abroad for meeting their export orders (Figure 4.6). Sight LCs, in this case, refer to letters of credits which are issued by banks in the form of 1 coded to honor a presentation when the documents are compliant (popularly called cash LC). Data also show a portion of documentary collection in import transactions.

Figure 4.6: Types of Import LCs and Contracts Issued by Banks during CY2019 and CY2020 (In Percentage)



Source: Survey Data (2021)

4.3 Documents Required in Documentary Credit

Use of documents in LC operations both in export and import transactions remained consistent. The survey data show that in case of all the documentary credit opened from the country in CY 2020, the issuing banks were required transport documents [bill of lading, airway bill, truck receipt etc.], commercial invoice and certificate of origin. The insurance documents are rarely asked as per the country's import policy, and insurance is generally covered by the domestic importers. In case of export LC, the documentary requirements are not very different, and insurance documents are hardly required. Bill of lading has been the most commonly used transport document (Table 4.2).

Table 4.2 Use of Different Transport Documents in Imports and Exports in CY 2019-2020				
	CY 2019 [%]		**CY 2020[%]**	
Transport Document [types]	Import	Export	Import	Export
Multimodal /Ocean Bill of Lading	62	76	60	75
Airway bill	8	10	10	15
RRI	29	12	21	11
Others	1	2	1	1
Source: Survey Data (2021)				

4.4 Credit Availability and Nature of Discrepancies in LC Operations.

Documentary credits commonly available for negotiation (Table 4.4). Trend of Popular 'Freely Available Credit' is losing ground as part of de-risking initiatives of the multinational banks throughout the world.

Table 4.4 Availability of Credit in Import and Export Payment in Bangladesh during CY 2019-CY 2020				
	CY 2019 [%]		**CY 2020 [%]**	
Credit Availability	Import	Export	Import	Export
Sight	5	5	25	15
Deferred	5	5	15	15
Acceptance	10	15	15	35
Negotiation	80	60	45	40
Source: Survey Data (2021)				

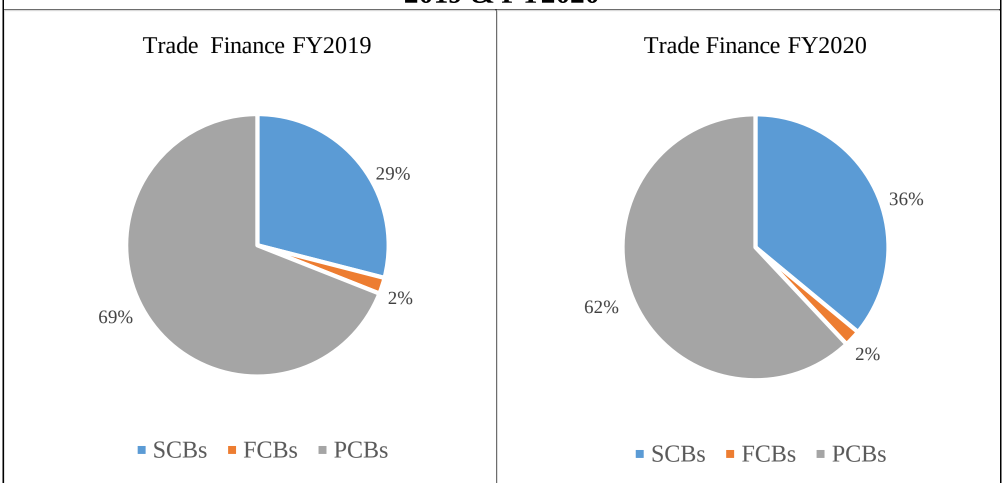
Table 4.5 Discrepancies in LC Documents				
	CY 2020 [%]		**CY 2019[%]**	
Discrepancies	Import	Export	Import	Export
Late Shipment	8	55	10	75
Late Presentation	12	40	15	60
LC Expired	5	20	5	20
Other Discrepencies	75	20	35	35
Source: Survey Data (2021)				

Descrepencies like late shipment and late presentation had been the most common discrepancies in both export and import documents over the years till CY 2019. Covid-19 brought changes in the submission of documents with some discrepancies in case of both exportation and importation of the country (Table 4.5). This may be explained by a very cautious approach of the global exporters in this period of unprecedented uncertainties (based on FGD).

4.5 Trade Finance Facilitation by Banks

Trade finance market is dominated by the PCBs in Bangladesh include both export and import financing. PCBs remained overriding player with 62% of the total trade financing in the FY 2020 (Figure 4.8). Of the pre-shipment finance, in CY 2019, PC was the main component for 81 percent of the total that declined to 70% in CY2020. This may be explained by the use of stimulus packages by the exporters in the context of the Covid-19 crisis.

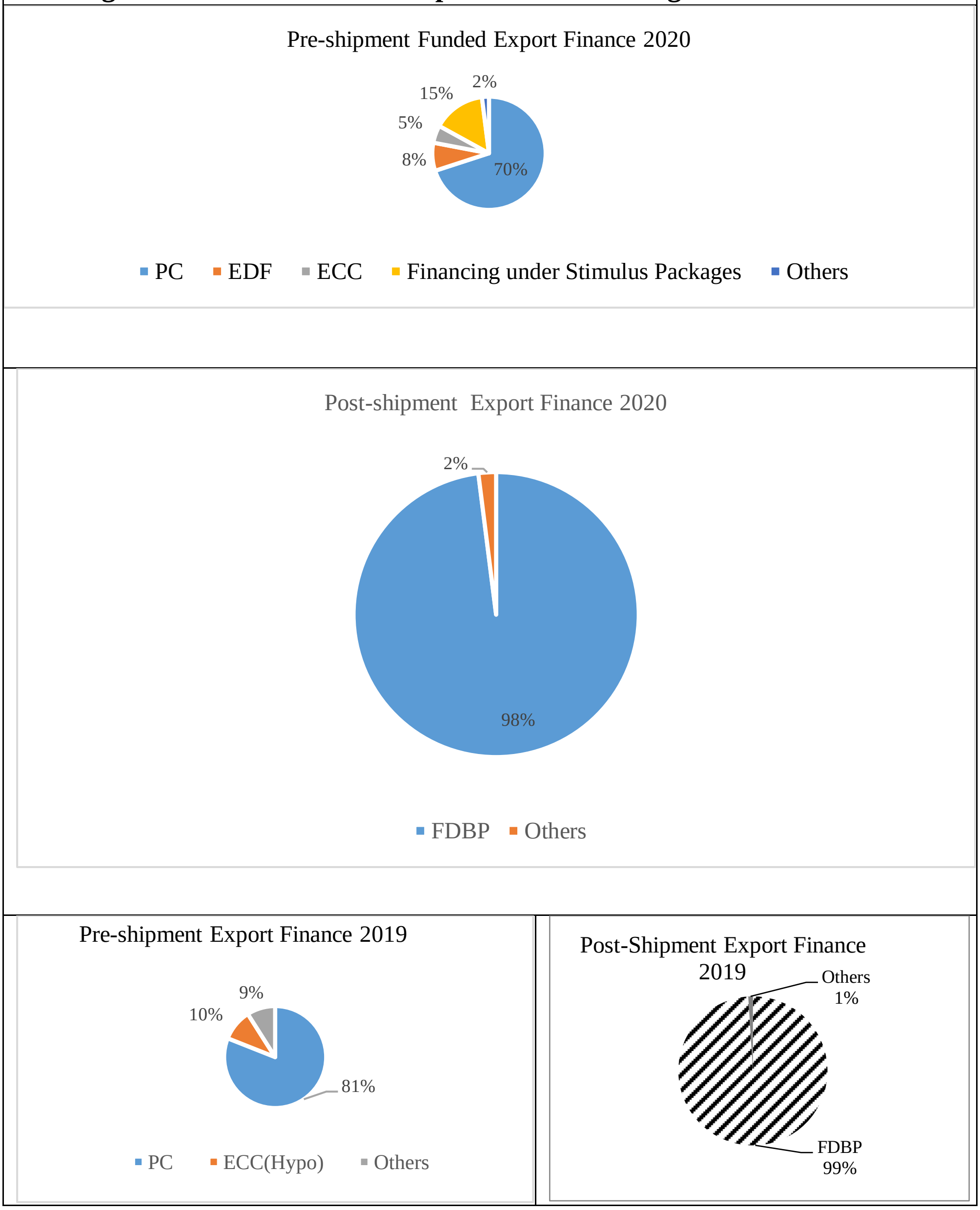
Figure 4.8 Trade (Export and Import) Finance by Bank Groups during FY 2019 & FY2020



Source: Authors' Calculation Based on MoF Data (2021)

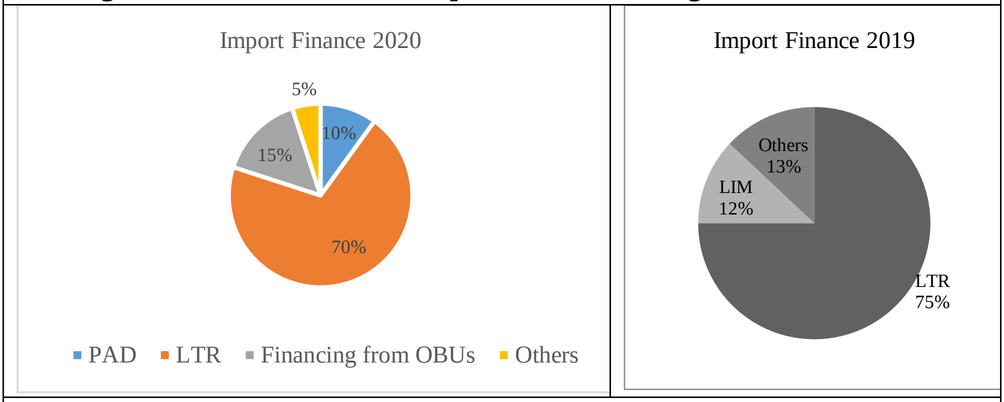
The FDBP remained the core component (98%) in the post-shipment credit services in CY 2020; 2% 'others' category include receivable financing including factoring which was insignificant (Figure 4.9). Most of the import financing was in the form of LTR, as most banks do not have or avail warehousing facilities. Inclusion of financing from OBUs in the graph is showing lower figure for the LTR in CY 2020 (Figure 4.10).

Figure 4.9 Distribution of Export Finance during CY2019-CY 2020



Source: Survey Data (2021)

Figure 4.10 Distribution of Export Finance during CY 2020-CY2019

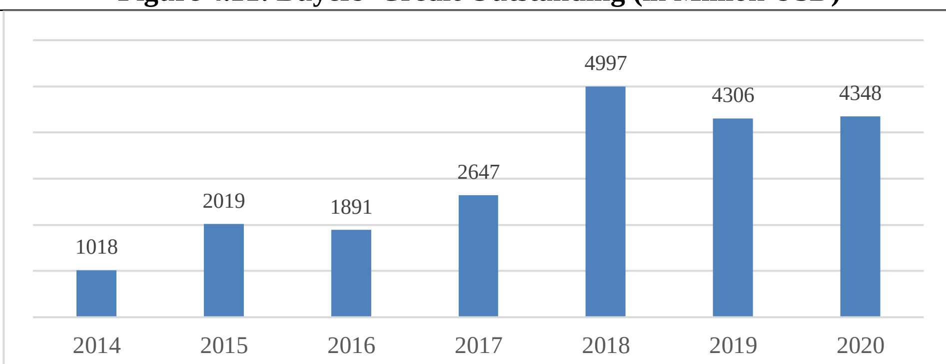


Source: Survey Data (2021)

4.6 Foreign Currency Credit Facilitation by Banks

Buyers credit received popularity over time in Bangladesh (discounting through OBU/correspondent bank) under deferred payment credit popularly called UPAS. Total buyers credit outstanding was increasing over the years, however the trend remained consistent over 2019 and 2020 (Figure 4.10). OBU activities of the FCBs have been dominant (FGD/Survey data).

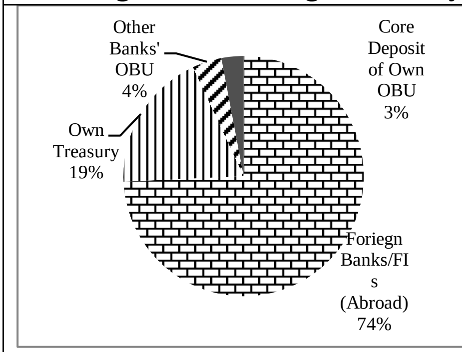
Figure 4.11: Buyers' Credit Outstanding (in Million USD)

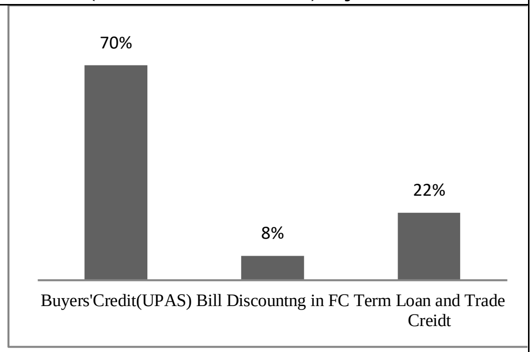


Source: BB, 2021

Short-term foreign currency financing is the major component of the OBUs asset portfolio; and borrowing (not deposits) is the significant portion of the liability side (Figure 4.12).

Figure 4.12 Foreign Currency Funds (Sources and Uses) by OBUs





Source: Survey Data (2021)

4.7 International Bank Guarantees and Standby LC

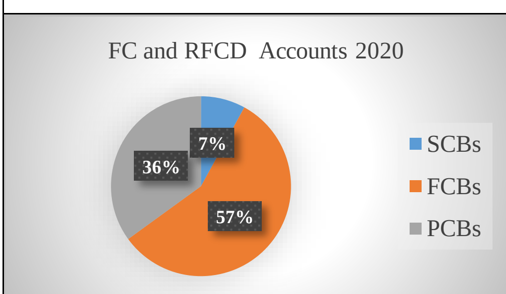
International bank guarantees/standby LC are extensively used/received by the government for pursuing public procurement. Sometimes, garments receive bank guarantees or standby LC as securities against export under documentary collection. Most of these bank guarantees issued have been direct guarantees. Other type of bank guarantees includes advance payment guarantees to support traders. The country's banks are permitted to issue indirect guarantee for the purpose of Hajj. Sometimes, international bank guarantees are required to avail foreign loans which is a relatively recent development.

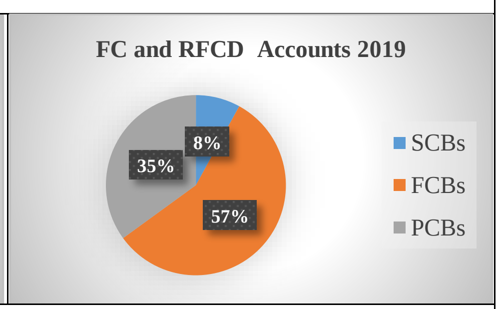
4.8 Maintenance of Foreign Currency Accounts by Banks

FCBs is the dominant bank group in terms of maintenance of FC and RFCD accounts. Bigger clients commonly resort to the FCBs for these services (4.13).

Figure 4.13: Proportion of Foreign Currency Accounts

[Amount in %] during CY 2019-2020





Source: Authors' Calculation Based on BB Data (2021)

4.9 Human Resource Development

Bank executives working in the trade services departments of banks are generally trained either from their own training institutes or from BIBM. Currently a considerable number of trade finance providing bank employees are having recognised professional qualifications. As of mid 2021, the banking industry is having over 1400 CDCS holders. Bank executives are also increasingly pursuing professional courses like CSDG, FIT, CAMS, CITF, etc. ICC Bangaldesh has been very active in offering relvent training courses. As of mid 2021, 150 participants have completed BIBM's CETS professional qualification. Since 2019, BIBM has introduced another program titled 'Certified Expert in Financial Crime and Money laundering (CEAF)' and currently there are 50 graduates.

4.10 Monitoring and Reporting of Trade Services

BB has brought about major changes in traditional reporting, and offered relaxation in the context of Covid-19. Additional information reuirements were also added during pandemic. In a major development during 2020-21, the data mismatch between Export Promotion bureau and Bangladesh Bank has tremendously reduced after some regulatory intervention. Now short shipment data is uploaded in ASYCUDA by customs under 'Standard Operating Procedure and then it is considered by EPB. Previously EPB did not consider the short shipment data. In addition, BB has updated 2,15,000 EXPs of 2015-2020 which also helped to reduce the gap between the data of BB and EPB. In august, 2020 the gap in data between EPB and BB was USD 453.85 million which has been reduced to USD 52.30 million in December, 2020 after these interventions (BB source).

5. Issues and Challenges on the Way to Improve and Consolidate Trade Service Operations by Banks in Bangladesh

5.1 Wage Earners Remittance Reflecting Apparent Remarkable Resilience

In contrast to the projection, wage earners' remittance inflows remained resilient and experienced remarkable growth in the recent period. Time befitting budgetary allocation of 2% for attracting wage earner remittance are contributing to higher inflows of remittances. Absence of hundi mode, better exchange rate in the formal channel, and reappointment of a section of returnees also contributed to the quick and strong rebound. The expert opinions on the potential fall of remittance inflows in response to the Covid-19 were shown to be driven by several key factors covering shut down or lock down, bad economic shape of the manpower importing countries, job loss of the Bangladeshi workers abroad, non-receipt of the salary and payment and so on. The trend is definitely welcoming and satisfying. However, certain disagreeable explanations of the continuous growth of remittances have also drawn attention in recent time in the context of the record breaking growth of remittances months after months throughout the year 2020. There are opinions on the possibilities of taking out money through trade mode that may be coming in to avail attractive rate and incentives.

5.2 LC with proceeds realization clause hardly Working

Bangladesh Bank allowed LC with Proceeds Realization Clause to ensure protection to the exporter and back to back LC issuing bank in the context of the Covid-19 driven economic and trade disruptions. This has considered particularly relevant as in most cases RMG exporters import raw materials from the nominated suppliers of the ultimate buyer of the RMG. This however is not generally accepted by the foreign exporter as a term of LC. Technically, this type of clause distorts independent nature of the documentary credit. Before covid-19, this provision was allowed only for Type-A industry, to facilitate transaction between sister concern and the parent company. Alternative product might be helpful to handle this back-to-back related risks as a security option.

5.3 Circular on ‘Open Account against Undertaken’ has Insignificant Implications

The circular issued in June 2020, with the title ‘Export under open account credit terms against payment undertaking/payment risk coverage with option of early payment arrangement on non-recourse basis’ is a notable one that appears to be an approach towards the direction of adopting into evolving trade finance products in the global market. This is a dynamic approach on the part of the central bank of Bangladesh. The document on ‘conditional open account’ offered multiple product options to support exporters. Market experiences came up with certain risks/challenges associated with it: The Exporters are allowed to ship goods on sales contracts under open account credit, but there is no framework for legally enforceable contract; the cost of fund to facilitate the exporter may not be covered within the designated rate due to higher cost of fund; the early payment facility is asked to arrange on non-recourse basis which is difficult to supervise; there are potential risks of under invoicing and over invoicing.

5.4 Gorwing Efforts for Trade Finance Transformation through Digitization

Trade digitization initiatives are going on at differential scale in different banks. Banks having technology infrastructure and financial strength are crucial factors in this connection. Block chain or digital ledger technology might transform trade finance market remarkably in the coming years. As in several other global economies, banks in Bangladesh are experimenting block chain in facilitating trade services. In August 2020, Standard Chartered Bank issued a Letter of Credit for ready-made garment exporter Viyellatex Ltd. over a blockchain network. Notably, the transaction did not involve any paperwork and was conducted digitally over the Contour blockchain. In November 2020, HSBC Bangladesh has executed the first-ever cross-border blockchain letter of credit transaction in Bangladesh, in a development that would reduce LC processing time from the standard 5-10 days to under 24 hours.

5.5 Sustainable Banking through Trade Financing

Necessity of integrating environmental concerns and sustainability received notable attention in the context of the Covid-19 challenges. In line with this, trade financing activities must integrate environmental risks in their operations for sustainability. It is not only about loan instrument to finance green projects, however, in the context of Covid-19, sustainability linked finance (like international bank guaranteed, letter of credit), ESG linked supply chain products, and other sustainability linked trade services are getting newer impetus. Green Transformation Fund is a relevant imitative of the Bangladesh Bank in this context that was initiated in 2016. In April 2020, Bangladesh Bank expanded the facility introducing EURO 200 million with the fund. The circular notes, financing on long term basis (5 to 10 yrs) from GTF in Euro would be admissible to all manufacturing industrial enterprises for importing of environment friendly & energy efficient/green capital machinery and accessories (including Buyer's Credit). (FE Circular No-20, 2020).

Following cases (5.1-5.4) reflect several major challenges in facilitating trade services by banks in Bangladesh that evolved during the review period.

Case 5.1: Export Order from Shell Bank
An exporter's bank got a LC from a bank which named a reputed foreign bank's short name. After getting the LC the exporting bank opened back to back LCs. After production, the exporter sent the goods and submitted the documents to the Bangladeshi bank's counter for post shipment import financing. In addition, after presentation of documents under back to back LC, the bank made payment under complying presentation. The exporting bank presented the export document to the foreign bank for payment. But payment was not made. Several communication could not help in realizing the export proceed. After investigation it was found the full name of the foreign bank is different though the short or abbreviated name matches with a reputed bank. And the LC opening bank here was a shell bank.
Bank Source

Case 5.2: Layering of money laundering using Transferable LC
A transferable LC was received by bank X from USA in favor of Exporter A. The exporter came to Bank Y for transferring the LC. Bank X sent the LC to Bank Y. The customer was new to Bank Y and the beneficiary under the transferrable LC was a buying house. The beneficiary asked Bank Y to transfer the LC in favor of second beneficiary B. After getting the transferred LC from Bank Y second beneficiary managed goods and submitted the documents to Bank Y. Bank Y arranged payment to the second beneficiary. In this payment arrangement it was found that the second beneficiary is a buying house itself and they were arranging the goods from a manufacturer linked with first beneficiary. Here banker raised doubt that first beneficiary could directly communicate with the manufacturer and he was unsure about the reason for inclusion of another buying house as second. The banker passed it to the higher authority and stopped payment.
Bank Source

Case 5.3: Shifting from DP to DA Terms in Export Trading
An exporter got an exporter order from UK and the payment method was documentary collection against DP terms. The exporter asked for back to back LC for importing raw materials from China. The banker wanted to insert realization clause as per BB circular issued in the context of the Covid-19 crisis. But the exporter said the Chinese supplier would not send goods against it and moreover he asked sight payment. So the bank issued back to back LC under sight payment. The raw materials were shipped and documents were submitted to the Bangladeshi bank.The bank has to make payment under complying presentation. But after production when the exporter sent the goods to UK, the foreign importing company said they wanted to change the payment terms from DP to DA due to the pandemic. And they also added they may cancel the order if the exporter doesn't accept their condition. In such a scenario, exporter and bank faced a challenge as the bank already financed the client. They had no option other than to accept the condition.
Bank Source

Case 5.4: Misusing LC through Regular Cancellation
An importer opened a number of LCs from a Bangladeshi bank over a period in favour of a number of Indian exporters and approached banks for cancellation on a regular basis. This tendency of opening and cancellation came to the notice of the concern bank official when the banker investigated the client's documents and other previous records. After investigation it was found that the foreign suppliers were new in every LCs. After investigation it was evidenced that the foreign exporters were availing financing facility from Indian banks showing the LCs sent from Bangladeshi bank.This is a crime and may damage reputation of the country's banks in the global business arena.
Bank Source

The FGD has identified and validated several trade service-related issues and challenges. Responses of the FGDs are summarised in Table -5.1.

Box 5.1: Summary outcome [issues/challenges] of Focus Group Discussions
• Banks are considering digitalization facility for examining documents under LC as in pandemic physical examination of documents may create operational interruption. • Bankers appreciated the response from Bangladesh Bank in the forms of relaxation and extension of timelines and restrictions considering covid-19 scenario. • Bankers are trying to use guarantee based open account in export but the demand from the traders is very low due to lack of competitive price benefit. • The demand for contract based export has increased and many contracts' payment terms have been deferred. • Due to lockdown in many countries, foreign importers were unable to make full payment. • Traders faced challenge in shipping goods on time and that has created problem to manage export financing facility by banks. • Bankers appreciated the policy guideline on post import financing (PIF) by Bangladesh bank. • Buying house depended export increased in this new normal scenario. • Bangladeshi exporters are now facing lower price competitive bargaining. • The risk in trade services is growing as the exporters are availing a number of lien banks which increases the exposure of the client. • Now exporters are shifting to basic goods from luxury items in RMG sector. • Bankers are demanding a clear definition of the sales/purchase contract in international trade. • Despite challenges, it is advisable to use realization clause in import LC (back to back LC) for buyer nominated foreign suppliers. • Delay in shipment requests from foreign buyer and delay in making payment have increased in this new normal scenario. The bankruptcy of many foreign buyers has resulted in a challenging situation for bankers as well as traders. • In 2020, the amount of remittance has increased due to the 2% incentive from 2019. • Freight charge has been increased significantly due to Covid-19 as shipment schedule is affected for quarantine requirement for berthing in port. • The stimulus package becomes burden for bankers as many traders are not using the package properly. • The borrowing cost has been increased for OBUs. In addition, Buy sell among A type and B type small firms has increased. • Due to decrease in LIBOR rate, the cost of financing reduced.
Note: Based on Two FGDs with the participation of bank executives.

6. Suggested Steps for Strengthening Trade Services by Banks

One, Despite notable increase in the documentary collection, documentary credit remained the dominant trade payment and financing technique of the country. The use of commercial letter of credit in the context of Bangladesh should not be considered only from the perspective of facilitating payment and financing. The product has unique features of handling country and crime risks, and a balanced approach to risk-sharing between exporters and importers. The circular on 'Conditional Open Account' issued in June 2020 also maintained the similar spirit of handling country risk in the export transactions of the country. To date, the responses to the initiative are very insignificant. Certain associated risks/challenges may be addressed in near future to complement this move: ensuring legally enforceable contract; rationalization of price restrictions; arrangement for monitoring non-recourse factoring and possible under and over invoicing. Further awareness and familiarity amongst bankers and traders are required on the multiple product dimensions of the circular. The shadow banking component, especially shell banking of these product variations should be under strict monitoring of the regulatory authority for avoiding any unexpected development.

Two, 'Purchase/sale contract' is particularly relevant for contact based trade payment methods: cash in advance, open account, and documentary collection. Documentary collection received notable boost, cash in advance increased and open account has been allowed during this Covid-19 challenging circumstance. A number of back-to-back LCs are issued in the country against purchase/sale contract. Vulnerability of the purchases/sale contract was also exposed by the cancellation of a number of import orders (as said). In such a circumstance, a legally enforceable purchase/sale contract is a necessity for ensuring optimum protection. Alongside ratifying the UN Vienna Convention on Contract of Sale (CISG), there should be clear instructions regarding transaction with the other non-ratifying countries by the domestic traders. Moreover, UNIDROIT principles should be ratified as the soft law to handle trade finance related disputes. It is to be mentioned here that most of the trading partners of Bangladesh are the signatories of CISG and UNIDROIT principles.

Three, Bangladesh Bank's circulars on relaxation and extension worked tremendously to support traders and bankers in handling Covid-19 devastation. Many of these relaxation and extensions would be withdrawn once the situation gets normal. Considering the practices of proceed realization in the neighbouring countries and in line with the traders' demand, the central bank may consider allowing export proceeds realization period for six months as a regular tenure. In addition to that, tenure for submission of bill of entry might also be six months. Regarding another market intervention, Bangladesh Bank's circular to minimize risk of back-to-back LC obligations in a scenario of importing from nominated suppliers of the buyers could hardly be used. LC with proceed realization clause is technically and ideally not desirable on the face of the LC and might be source of dispute. Regarding the circumstance, use of documentary collection to import raw materials under DA might be an option if agreed by the exporter. Certain policy directions may be helpful to promote such a practice.

Four, Financial crime took new shape and become increasingly challenging in the context of the Covid-19 crisis. Bangladesh experienced remarkable boost in the workers' remittance inflows in contrast to the projections. Despite optimism and satisfaction, unpleasant explanations of the possibilities of round tripping (outflow of payment for inflow) to avail attractive rate and incentives should come under monitoring. Bangladesh Bank's recent circular (that incorporates BFIU's circular as well) on safeguarding exports should be enforced comprehensively, and trade financing banks must undertake counterparty assessment to avoid transactions with shell bank. Stringent incentive structure should be enforced against any transaction without ensuring satisfying credit report and other compliance requirements associated with trade related country risks.

Five, Trade finance banks and traders are still struggling with Covid-19 devastation and uncertainties of further destruction remain. During the first lock down, banks with centralized trade operations and having technology infrastructure were able to readjust their work plan and able to abruptly manage the operations with the combination of maximum resources at 'work from home' and limited resources in 'physical locations'. However, banks with weak technology infrastructure and decentralized trade operations confronted notable challenges and disruptions. Technology adoption and centralized trade operations are the areas to address by a big section of banks of the country to minimize risk of any future such devastations. There is no doubt that certain banks are pushing hard and showing paths of adopting state of the earth technology in trade facilitation. However, trade digitization is not amongst the priorities in most trade finance banks. Certain regulatory provisions and incentives might be supportive to promote the banks.

Six, *Covid-19 draws attention to allocate resources to promote sustainable banking ventures, and integrate environmental sustainability with all commercial banking operations. Environmental concerns and associated premiums may be tagged with trade transactions and all trade financing products like documentary credit, documentary collection, international bank guarantees and supply chain finance. Green Transformation Fund is a good example of Bangladesh Bank to support importation of environment friendly and green machinery by the industries of the country. Bangladesh Bank already received applause for undertaking green banking initiatives. Integrating environmental risk and sustainability with the trade finance products with greater inclusion (minimization of trade service gap) might be an upcoming agenda for ensuring green and inclusive trade services.*

Paper Five

TREASURY OPERATIONS OF BANKS

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List of Abbreviations

ACC	Anti-Corruption Commission
ACU	Asian Clearing Union
AD	Authorized Dealer
ADB	Asian Development Bank
AML	Anti-Money Laundering
AMLD	Anti-Money Laundering Department
APG	Asia Pacific Group
ASYCUDA	Automated System for Customs Data
AWB	Air Waybill
B/E	Bill of Entry
BB	Bangladesh Bank
BC	Bills for Collection
BCWMA	Bangladesh Ceramic Wares Manufacturers Association
BDT	Bangladesh Taka
BEFTN	Bangladesh Electronic Fund Transfer Network
BEPZA	Bangladesh Export Processing Zones Authority
BERC	Bangladesh Energy Regulatory Commission
BFIU	Bangladesh Financial Intelligence Unit
BGAPMEA	Bangladesh Garment's Accessories & Packaging Manufacturers & Exporters Association
BGMEA	Bangladesh Garment Manufacturers & Exporters Association
BIBM	Bangladesh Institute of Bank Management
BIN	Business Identification Number
BKMEA	Bangladesh Knitwear Manufacturers & Exporters Association
BOE	Bill of Exchange
BPO	Bank Payment Obligation
BPGMEA	Bangladesh Plastic Goods Manufacturers & Exporters Association
BTMA	Bangladesh Textile Mills Association
C&F	Clearing and Forwarding
CAMS	Certified Anti money Laundering Specialists
CCI&E	Chief Controller of Import and Export
CD	Current Deposit
CDCS	Certified Documentary Credit Specialist
CFR	Cost and Freight
CFT	Combating the Financing of Terrorism
CGFS	Committee on the Global Financial System

CIB	Credit Information Bureau
CIF	Cost, Insurance and Freight
CIP	Carriage and Insurance Paid To
CISG	Contract for the International Sale of Goods
CITF	Certificate in International Trade and Finance
CITF	Certificate in International al Trade and Finance
COTIF	Convention concerning International Carriage by Rail
CPT	Carriage Paid To
CSDG	Certificate for Specialists in Demand Guarantee
CY	Calendar Year
DA	Documents Against Acceptance
DAP	Delivered at Place
DAT	Delivered at Terminal
DBI	Department of Banking Inspection
DDP	Delivered Duty Paid
DOCDEX	Documentary Instruments Dispute Resolution Expertise
DOS	Department of Offsite Supervision
DP	Documents Against Payment
EDF	Export Development Fund
EPZ	Export Processing Zones
ERC	Export Registration Certificate
ERQ	Exporters Retention Quota
EXP Form	Export Form
EXW	EX Works
EZ	Economic Zones
FAS	Free Alongside Ship
FATF	Financial Action Task Force
FC	Foreign Currency
FCA	Free Carrier
FCB	Foreign Commercial Bank
FDBP	Foreign Documentary Bill Purchase
FE	Foreign Exchange
FEOD	Foreign Exchange Operation Department
FEPD	Foreign Exchange Policy Department
FERA	Foreign Exchange Regulation Act
FIT	Finance of International Trade
FIT	Finance of International Trade
FOB	Free on Board

GFET	Guidelines for Foreign Exchange Transactions
ICC	International Chamber of Commerce
ICC	Institute Cargo Clauses
IDA	International Development Association
IFC	International Finance Corporation
IFA	International Forfeiting Association
IMP Form	Import Form
IRC	Import Registration Certificate
ISBP	International Standard Banking Practice
ISP	International Standby Practices
ITC	International Trade Center
KYC	Know Your Customer
LC	Letter of Credit
LCAF	Letter of Credit Authorization Form
LDBP	Local Documentary Bill Purchase
LFMEAB	Leather goods & Footwear Manufacturers & Exporters Association of Bangladesh
LIM	Loan Against Imported Merchandise
LTR	Loan Against Trust Receipt
MFI	Microfinance Institution
MLPA	Money Laundering Prevention Act
MOF	Ministry of Finance
MNC	Multinational Corporations
MT	Message Type
NBR	National Board of Revenue
NFCD	Non-Resident Foreign Currency Deposit
NVOCC	Non-Vessel Operating Common Carrier
OBU	Offshore Banking Unit
OD	On Demand
PAD	Payment Against Documents
PCB	Private Commercial Bank
PI	Pro-forma Invoice
PRC	Proceed Realization Certificate
PSI	Pre Shipment Inspection
PwC	Price water house Coopers
RFCD	Resident Foreign Currency Deposit
RIT	Rationalize Input Template
RMG	Ready Made Garments
RRI	Road Rail and Inland Waterway

SCB	State Controlled Bank
SCF	Supply Chain Finance
SME	Small and Medium Enterprise
SOD	Secured Overdraft
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TBML	Trade Based Money Laundering
TIN	Tax Identification Number
TM	Travel and Miscellaneous
TTI	Total Tax Incident
UAE	United Arab Emirates
UCPDC	Uniform Customs and Practice for Documentary Credit
UK	United Kingdom
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNSCR	United Nations Security Council Resolution
UPAS LC	Usance Pay at Sight Letter of Credit
URC	Uniform Rules for Collection
URDG	Uniform Rules for Demand Guarantee
URF	Uniform Rules for Forfeiting
URR	Uniform Rules for Bank to Bank Reimbursements under Documentary Credits
VAT	Value Added Tax
WTO	World Trade Organization

Treasury Operations of Banks

1. Introduction

The treasury activity of a bank is always challenging. One of the main functions of the treasury department is to control and manage the bank's fund and make sure that cash is freely available to all the departments of a bank for their smooth functioning. To perform its functions efficiently, the treasury people must understand the movements in the global marketplace.

Covid-19 has significantly changed the risk management landscape of the banking industry. The covid-19 pandemic has put a severe strain on people and businesses across the globe. The crisis also raises questions about the effectiveness of banks' existing risk management frameworks (KPMG, 2020). New strategies, methodologies, roles, and assessments will need to be developed to anticipate and respond to environmental and pandemic events in the future (PWC, 2020). Special efforts will be needed to assess the bank's current treasury risk management system on a priority basis to deal with pandemic threats and vulnerabilities. Stresses to the financial system, whether driven by pandemics, terror attacks, or global economic downturns demand increased focus by treasurers on the management of cash and liquidity in the short- and medium-term. Treasurers should take lessons from the Covid-19 pandemic so that they can take the necessary initiatives to build resiliency and address the challenges ahead.

The role of banks now revolves around governments' efforts to keep the economy functioning and the treasury is playing that role on behalf of the bank (Poole, 2020) to respond to meet different sectors' fund and other financial services. The government is looking to banks to ensure the liquidity and credit needs of the economy. In recent times, treasury risk management has often been in the news, especially in situations where things have gone wrong. Efficiency in risk management has become a critical element of banks' growth and sustainability. Therefore, any problems in risk management have an immediate effect on the banking industry, financial markets, and financial systems. Thus, the changing circumstance demands greater emphasis on efficient treasury management from the viewpoints of both banks and regulatory authorities. Because of the significant role of treasury, Bangladesh Bank has issued a guideline to establish a separate treasury department. Among various departments in banks, the treasury department is the most significant, but the least understood department. Against this backdrop, this study aims at examining the activities of the treasury department of banks in Bangladesh.

The overarching objective of this paper is to review the activities of treasury operations of banks in Bangladesh for 2020 and the first half of 2021. The specific objectives are to: ***one,*** discuss the conceptual issues of treasury operations in banks; ***two,*** describe the regulatory framework of treasury operations; ***three,*** analyse various activities performed by the treasury department of banks; and ***four,*** identify challenges faced by treasury departments and put forward some recommendations.

Primary data were collected from bank through a questionnaire. A total of 30 banks (Appendix-1) responded to the questionnaire survey (Appendix-2). In addition, a focus group discussion (FGD) with the representatives of the treasury was conducted to get insights about the overall treasury related issues and also to identify the challenges faced by the treasury departments during the Covid-19 pandemic. A list of the FGD participants is given in Appendix-3 and the questions in Appendix-4. Various publications of the Bangladesh Bank and published literature mainly from the period January 2019 to June 2021 were used. The responses from the banks were accumulated, compiled, and analysed. This report has been finalised after incorporating the feedback of discussants .

This paper is organised into six sections. Section one describes the background, objectives, and methodological issues. Section two discusses the conceptual framework of treasury operations. Section three delineates the regulatory framework of treasury operations. The status and challenges of treasury in the global marketplace are shown in section four. Section five analyses treasury operations of banks in Bangladesh for 2020 and the first half of 2021. Finally, some challenges and recommendations as a major take aways offered in section six.

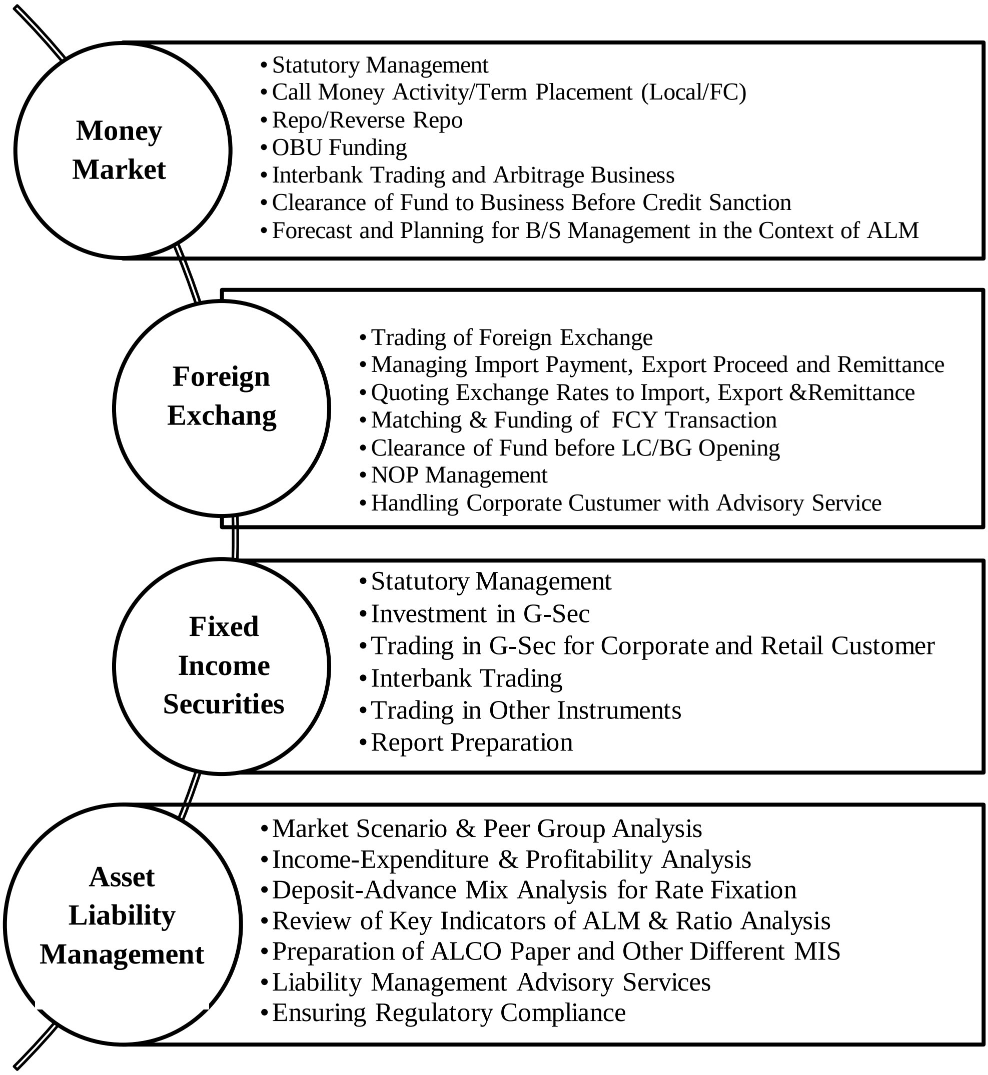
2. Treasury Operation of Banks: Conceptual Framework

Treasury management of banks includes mobilization of funds and investing those funds in a way to maximize banks' profitability. Treasury functions differ from country to country, depending on the depth of the financial market of that country. In Bangladesh, the treasury department mainly deals with the money market for managing the liquidity of the local currency, foreign exchange market for managing the liquidity of the foreign currency, fixed income securities market for managing investment functions, and various indicators of balance sheet i.e. asset, liability management and ensuring capital adequacy for the overall management of the bank. Figure-1 presents the functional areas of treasury department of banks in Bangladesh.

Money Market: Money market activities refer to the raising and deployment of short-term funds with a maturity not exceeding one year. Money market dealers arrange short and medium-term funds at the most economical way. The money market desk ensures that the bank remains sufficiently liquid, meeting all its financial commitments and obligations to its customers. This enables banks to properly plan for the maintenance of CRR, SLR, LCR, NSFR, liquidity contingency plan, and commitment position. Several money market instruments are available globally, some of which do not exist in Bangladesh. Recently, the treasury is also involved in managing the OBU funding.

Foreign Exchange: Forex market is a market where different foreign currencies are traded. The exchange rate is determined in the market based on market demand and supply forces of the respective currencies. In the forex market, banks are free to buy and sell foreign currency in the spot market and also in the forward markets through authorized dealers. However, to avoid any unusual volatility in the exchange rate, the Bangladesh Bank remains vigilant over the foreign exchange market and intervenes by buying and selling foreign currencies whenever it deems necessary to maintain stability in the market. Treasury needs to look at all the overdue payments related to FC liquidity management and forex position. Forex desk is one of the leading market makers in spot, swap, and forward transactions in the inter-bank market.

Figure-1: Functional Areas of Treasury



Fixed Income Securities: In Bangladesh, transactions of fixed income securities are dominated by Primary Dealers (PD). Primary dealers are the most significant vehicle through which open market operations of monetary policy is transmitted. In addition to the primary dealers, the Bangladesh Bank devolves a portion of government securities to the non-PD banks. As a result, the treasury department of all commercial banks is now engaged in fixed income securities operations. Unfortunately, very few corporate bonds are available in our market. Large corporate houses are mainly dependent on banks or FIs for their financing need. They do not participate in the money market or bond market, which is a very common phenomenon in other countries. As a result, our money market is fully bank dependent and the bond market is shallow. The products usually traded in the fixed income security market are treasury bills and treasury bonds. Also, some banks have issued subordinated debt through private placement for supporting their capital requirement under the Basel framework. The participants of these private placements are the treasuries of commercial banks and financial institutions.

Asset Liability Management (ALM): The ALM is a separate unit within the treasury that ensures efficient allocation of funds with an acceptable and informed risk structure (Kumar et. al. 2005). To review and formulate strategies to manage the balance sheet related issues, banks must have a committee comprising the senior management of the bank known as the Asset Liability Committee (ALCO). The ALM desk is also concerned with maintaining the desired liquidity structure of a bank and other factors affecting the structure and composition of a bank's balance sheet for ensuring bank's stability.

3. Legal Framework of Treasury Operations of Banks in Bangladesh

The major circulars related to the treasury operations issued by Bangladesh Bank are summarized below:

Table-1: Summary of the Treasury related Major Circulars

Circular Reference	Broad Content
BRPD Circular No. 02 dated 07/03/2016	Managing Core Risk in Banking: ALM Guideline
BRPD Circular No. 01 dated 01/03/2016	Managing Core Risk in Banking: Forex Risk Management Guideline
BRPD Circular No. 03 dated 08/03/2016	Managing Core Risk in Banking: ICC Guideline
DOS Circular No. 4, October 08, 2018	Risk Management Guidelines for Banks
BRPD Circular No. 18, December 21, 2014	Revised Regulatory Capital Framework in Line with Basel-III
DOS Circular No. 01, January 01, 2015	Implementation of Basel III Liquidity Ratios
FRTMD Circular No. 06, July 29, 2003	Regulations for Primary Dealers
DOS Circular No. 23, December 27, 2011	Islamic Inter-bank Fund Market
DOS Circular Letter No. 26, August 19, 2019	Regarding CRR and SLR of OBU

Source: *Bangladesh Bank*

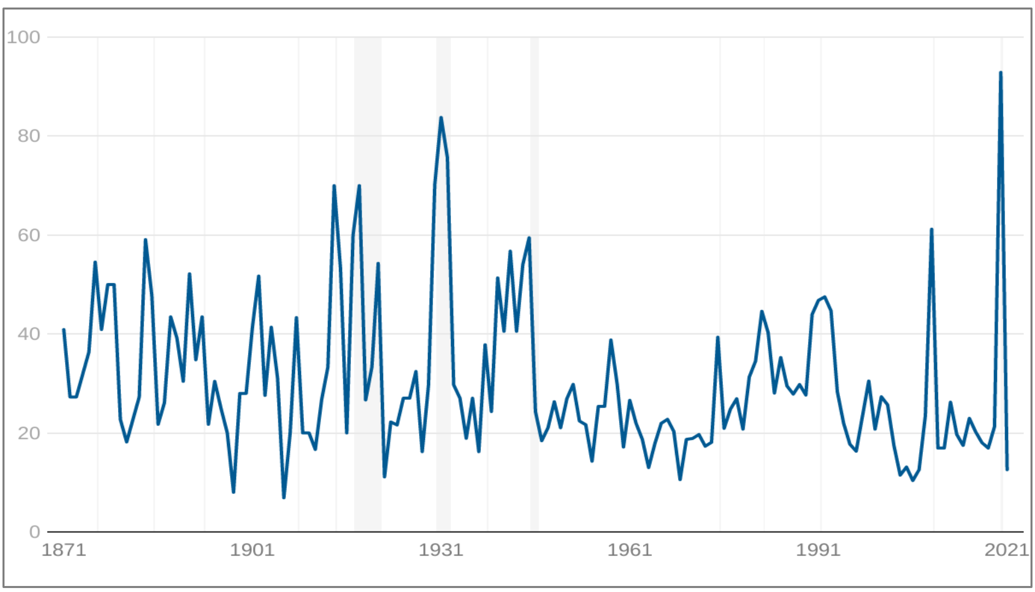
To cope up with the current situation amid the pandemic, the government took several initiatives, including the declaration of the stimulus packages. Consistent with these actions, Bangladesh Bank has also taken many initiatives so that the country can fight the pandemic situation from an economic perspective. In this section, the major regulatory changes related to treasury operations that took place during the pandemic situation are summarized in the appendix-5.

4. Trend and Challenges of Treasury Activity in the Global Market

4.1 Global Trend 2021: Corona Pandemic

Because of the devastating impact of the Corona pandemic, the Global Trend for 2020 is extremely difficult for both developed and developing countries. The Corona epidemic has wreaked havoc on economies, a phenomenon unmatched in recent memory. According to the Global, Economic Prospects report released in June 2020 worldwide GDP would shrink by 5.2 per cent in 2020, while global growth would fall by 8%. The long-term shutdown, which halted industrial activity, negatively impacted per capita income. Due to the industrial shutdown, even advanced economies will see a 7% drop in their per capita income. According to the World Bank, the epidemic will cause the majority of the country to regress. The graph below shows the percentage of economies experiencing a yearly decrease in per capita GDP, based on statistics projected for 2021. Global recessions are indicated by the shaded regions in the graph.

Figure-2: Share of Economic Recessions 1871 - 2021

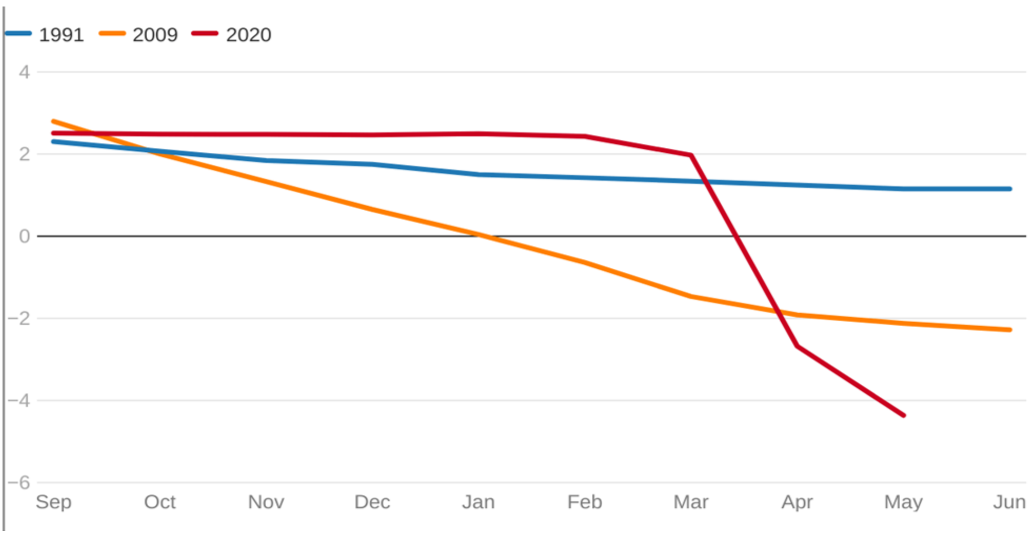


Source: *World Bank;* ***Note:*** *Projected figure for 2020 and 2021*

4.2 Recession in 2020

The unprecented shock of the coronavirus epidemic, and the draconian measures taken to manage it, has sent the global economy into a nose dive. The world economy is expected to contract by 5.2 per cent this year, according to World Bank estimates. According to the World Bank's June 2020 Global Economic Prospects, this would be the biggest recession since World War II, with the highest proportion of economies seeing reductions in per capita production since 1870. Domestic demand and supply, commerce, and finance are all expected to be significantly disrupted in advanced economies by 2020, resulting in a 7% drop in output activity. The economy of emerging markets and developing countries (EMDEs) is anticipated to fall by 2.5 percent in 2020, the first time in at least sixty years. In 2020, per capita earnings fell by 3.6 percent, putting millions of people in abject poverty.

Figure-3: Covid-19 Recession and Global GDP Growth

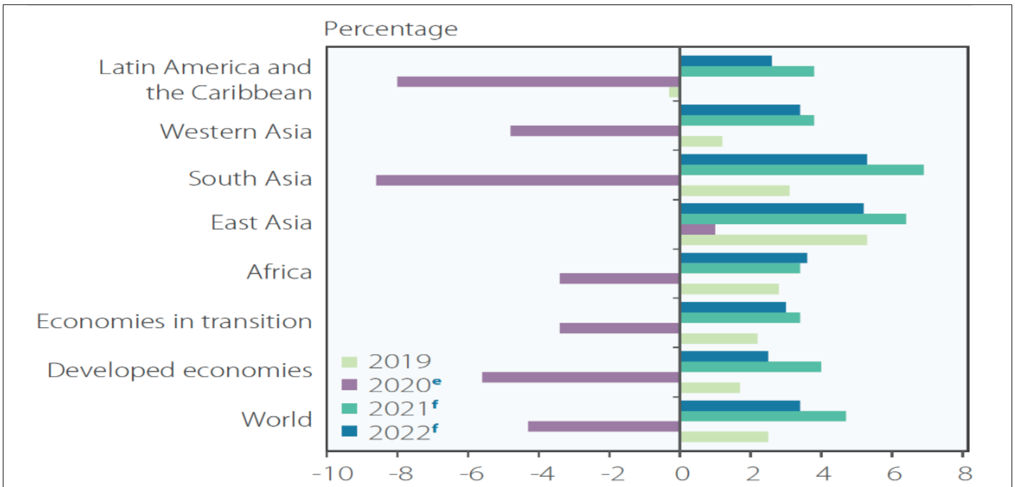


Source: *Consensus Economics, World Bank*

Global production dropped by 4.3 per cent in 2020, more than three times what it was during the global financial crisis of 2009. The recovery was only 4.7 per cent. Due to the stringent and lengthy lockdown restrictions implemented in several European nations and certain portions of the United States during the epidemic, the developed economies were impacted the worst, with an anticipated production drop of 5.6 percent in 2020. In emerging nations, the reduction is anticipated less severe, with output falling by 2.5 percent in 2020. However, the overall picture hides substantial regional heterogeneity. East Asia had a positive, if modest, GDP growth rate in 2020, outperforming all other emerging areas. Latin America and the Caribbean, as well as South Asia, had the steepest drops in output. In 2020, the least developed nations'

(LDCs) GDP shrank by 1.3 per cent. By April 2020, almost 2.7 billion workers, or 81 per cent of the global workforce, had been affected by full or partial lockdown measures. Job and income losses are expected to force an additional 131 million people into poverty by 2020, many of whom are women, children, and members of vulnerable communities.

Figure-4: Growth of World Domestic Product



Source: UN DESA, based on projections and scenarios generated by the World Economic Forecasting Model (WEFM).

5. Review of Treasury Operations of Banks in Bangladesh

Treasury activities of banks in Bangladesh are mainly associated with liquidity management of both the money market and foreign exchange market, the management of investment in government securities, and the key indicators of assets, liabilities, and capital. The treasury of banks is now integrated and operated under a single umbrella. Treasury operations of banks in 2020 and the first half of 2021 along with their comparisons with the previous periods are presented below.

5.1 Treasury Activities Associated with Money Market

The overall liquidity position of the banking sector during the last one and a half years is presented in Table-2, which describes the required, maintained, and excess amounts of CRR and SLR. Both CRR and SLR were surplus in 2020, mainly because of a lack of credit demand. The excess reserve increased further in the second quarter of 2021, due to appropriate action of BB to rein the liquidity debacle. The excess liquidity has been reduced in September to some extent due to withdrawal during Eid whereas the situation revived in June because of an increasing remittance flow and a slight upturn of the economic activities.

Table-2: Liquidity Position of the Banking Sector

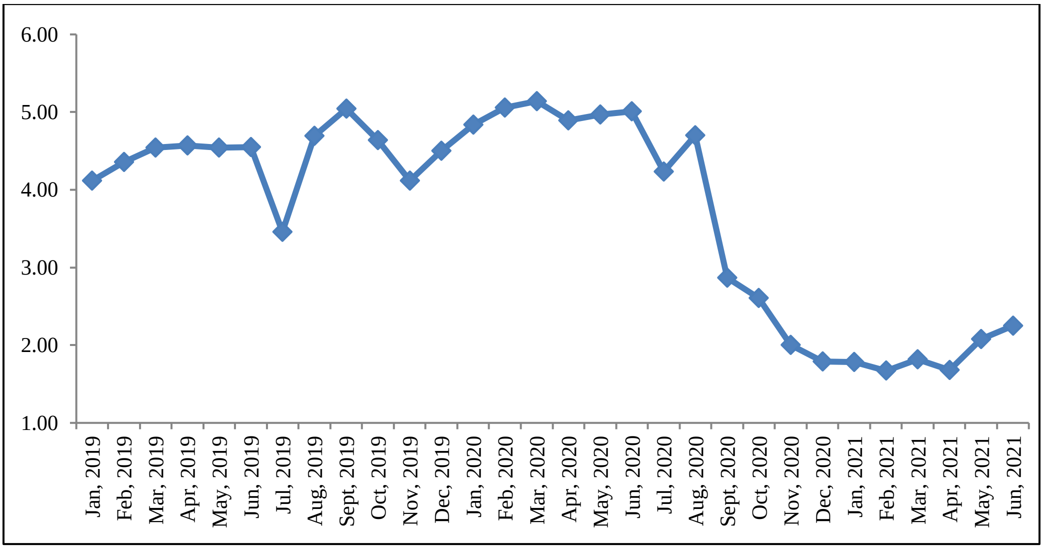
(BDT in Crore)

	CRR			SLR		
	Required	**Maintained**	**Excess**	**Required**	**Maintained**	**Excess**
March-19	55,658	64,788	9,130	123,286	186,653	63,367
June-19	56,357	74,936	18,579	124,758	210,374	85,616
September-19	60,587	113,823	53,236	134,447	223,410	88,963
December-19	62,005	78,541	16,536	137,105	242,794	105,689
March-20	64,691	80,819	16,128	143,055	232,992	89,937
June-20	45,634	75,914	30,280	144,086	283,664	139,578
September-20	53,270	74,620	21,820	1,49,070	3,18,720	1,69,660
December-20	55,390	1,00,160	44,760	1,54,230	3,58,950	2,04,720
March-21	57,140	1,01,090	43,950	1,56,890	3,55,350	1,98,470
June-21	58,060	1,20,530	62,470	1,59,320	3,90,780	2,31,460

Source: *DOS, BB*

Figure-5 shows the changes in the weighted average call money rates from January 2019 to June 2021. The weighted average call money rate was mostly steady during the period with some exceptions. The highest rate was observed in March 2020 (5.14%), whereas the rate was the lowest in February 2021 (1.67%). The call money rate showed some degree of volatility before Eid and increased to 4.70% in August from 4.23% in July. Afterwards, the rate continued to decline, reached the lowest at 1.67% in February 2021 and then start rising with some oscillations. The call money rate was around 2% during the last six months of 2021 due to the central bank repo facility and stimulus packages.

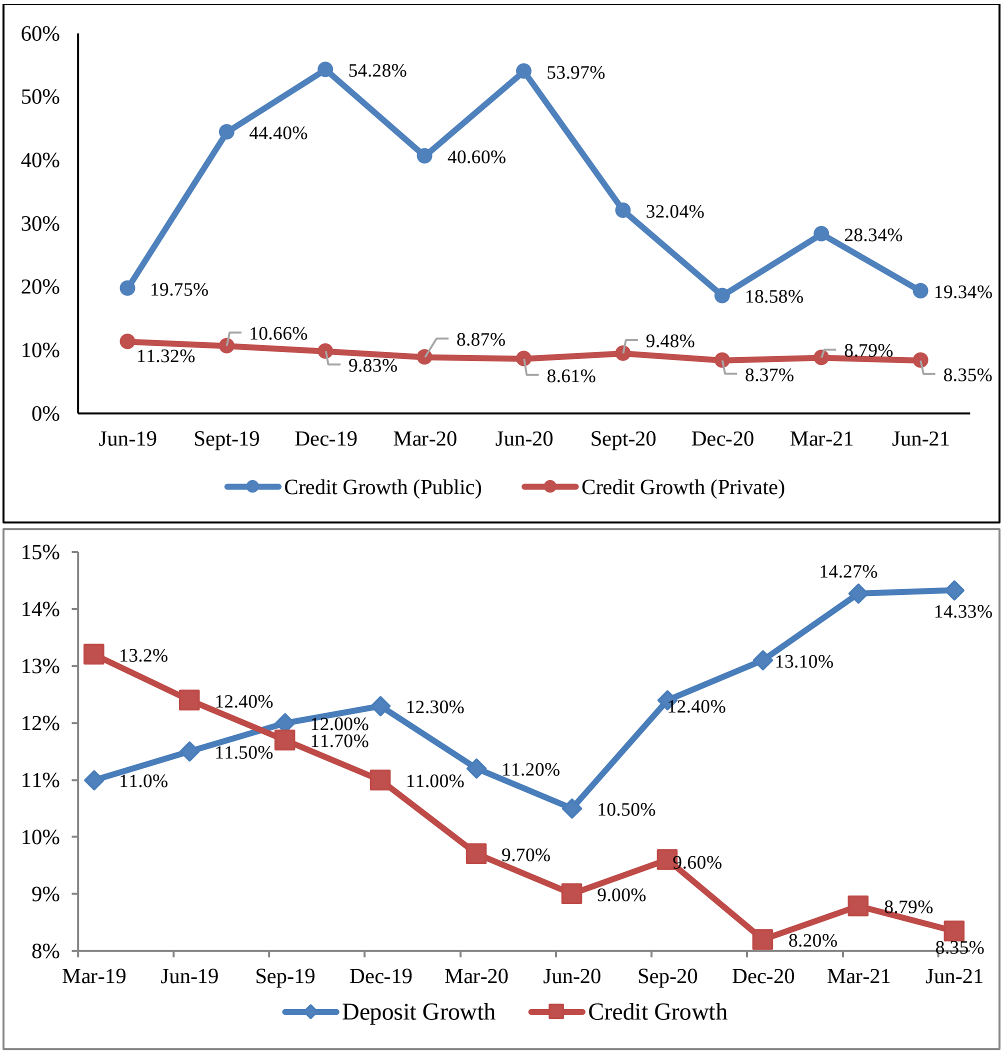
Figure-5: Movement of Weighted Average Call Money Market Rates



Source: *Economic Trends, Bangladesh Bank*

Figure-6 shows that the credit growth to the public sector, decreased from 53.97% in June 2020 to 19.34% in June 2021. Similarly, the credit growth in the private sector also revealed a falling trend. The declining growth in credit is due to the outbreak of coronavirus. Figure-6 shows that there was an uprising trend in the deposit growth in FY21. The deposit growth of 14.35 per cent exceeded the credit growth of 8.35 per cent in June 2021. It signals to the treasury that the market liqidity is likely to be tightened with the improving Covid-19 situation.

Figure-6: of Credit Growth Trend (Public and Private) and Deposit Growth



***Source:** BB Quarterly*

Table-3 shows the quarterly weighted average deposit rate from March 2019 to June 2021. In the case of SOCBs, the rate was 4.26 per cent in June 2020, which rose to 4.48 per cent in Sept 2020 and March 2021. In contrast, the deposit rate of PCBs declined significantly from 5.61 per cent in June 2020 to 5.29 per cent in June 2021. The rate of FCBs was the lowest among all categories of banks, although it decreased from 2.15 per cent in 2020 to 0.92 per cent in June 2021. The overall weighted average deposit rate of the banking sector declined and reached 4.18 per cent in June 2021 from 5.70 per cent in December 2019.

Table-3: Weighted Average Deposit Rate by Type of Banks (%)

Bank Groups	2019				2020				2021	
	Mar	**Jun**	**Sept**	**Dec**	**Mar**	**Jun**	**Sept**	**Dec**	**Mar**	**Jun**
SOCBs	4.38	4.28	4.47	4.43	4.41	4.26	4.48	4.43	4.48	4.31
SBs	5.70	5.70	5.76	5.81	5.63	5.61	5.71	5.43	5.43	5.63
PCBs	5.96	6.08	6.36	6.38	6.00	5.42	5.22	4.78	4.53	4.29
FCBs	2.23	2.46	2.39	2.31	2.15	1.87	1.72	1.37	1.16	0.92
All	**5.35**	**5.43**	**5.65**	**5.70**	**5.44**	**5.02**	**4.89**	**4.56**	**4.39**	**4.18**

Source: *BB Quarterly*

The most significant change was observed in the case of the weighted average lending rate. This change is quite expected, because of the implementation of the cap on the lending rate from 1st April 2020. The outcome is encouraging for the borrowers as they were demanding a single-digit lending rate to boost the business activity and economic growth. The aggregate weighted average lending rate was 7.36 per cent in June 2021 (compared to 7.95 per cent in June 2020), which was well below the regulatory ceiling of 9 per cent (Table-4). The rate of the SOCBs was 6.20 per cent in June 2021 (compared to 6.59 per cent in June 2020), which was the lowest among all categories of banks. The lending rate of SBs, PCBs, and FCBs reached 7.34 per cent, 7.71 per cent, and 6.173 per cent respectively in June 2021 (compared to 7.71 per cent, 8.30 per cent, and 8.03 per cent respectively in June 2020). It is expected to be a stimulus for the economy due to increased consumption and investment. However, the challenge is to maintain this single digit lending rate in the days to come.

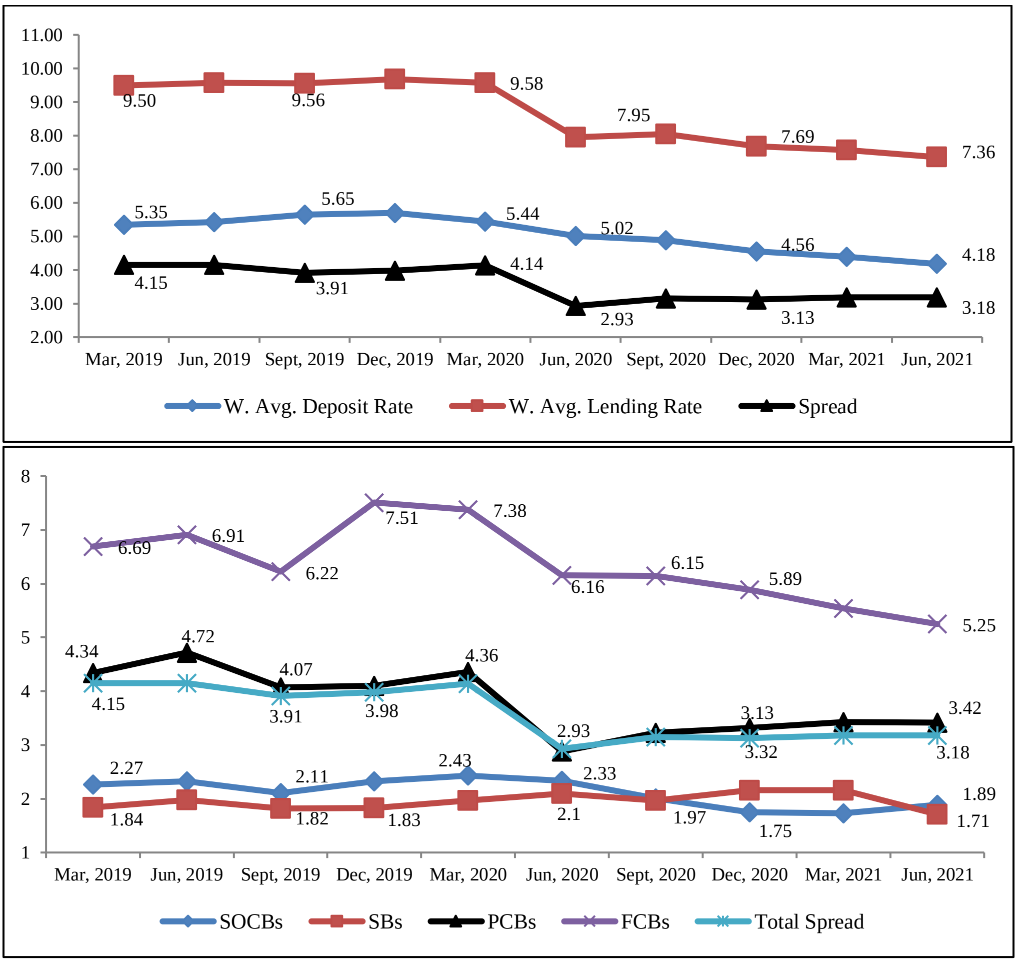
Table-4: Weighted Average Lending Rate by Type of Banks (%)

Bank Groups	2019				2020				2021	
	Mar	**Jun**	**Sept**	**Dec**	**Mar**	**Jun**	**Sept**	**Dec**	**Mar**	**Jun**
SOCBs	6.65	6.60	6.58	6.75	6.84	6.59	6.49	6.18	6.21	6.20
SBs	7.54	7.68	7.58	7.64	7.60	7.71	7.68	7.59	7.59	7.34
PCBs	10.30	10.80	10.43	10.48	10.36	8.30	8.45	8.10	7.96	7.71
FCBs	8.92	9.37	8.61	9.82	9.53	8.03	7.87	7.26	6.70	6.17
All	**9.50**	**9.58**	**9.56**	**9.68**	**9.58**	**7.95**	**8.04**	**7.69**	**7.57**	**7.36**

Source: *BB Quarterly*

Both the interest rates of loans and deposits have been falling from March 2020 (Figure-7). The difference between the interest rates of loans and deposits has also significantly squeezed since March 2020 due to policy measure of BB. The level of spread is expected to be below 3 per cent in an efficient banking system. Data show that compared to 4.15 per cent in June 2019, the spread reached the lowest at 2.93 per cent in June 2020, and then started to rise to reach 3.18 per cent in June 2021. However, there is a significant variation in the level of spread among different bank groups. The spread of PCBs is very close to the industry average, while the spread of SOCBs is below industry average and the spread of FCBs is well above the industry average. The main reason for the high spread of FCBs is the efficient management of the cost of funds, which can be a lesson for others in the industry.

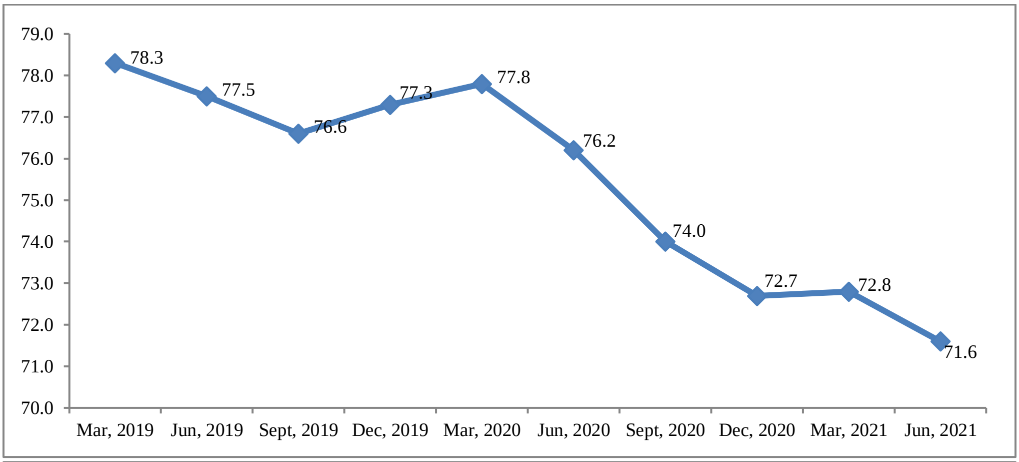
Figure-7: Bank Group-wise Interest Rate Spread

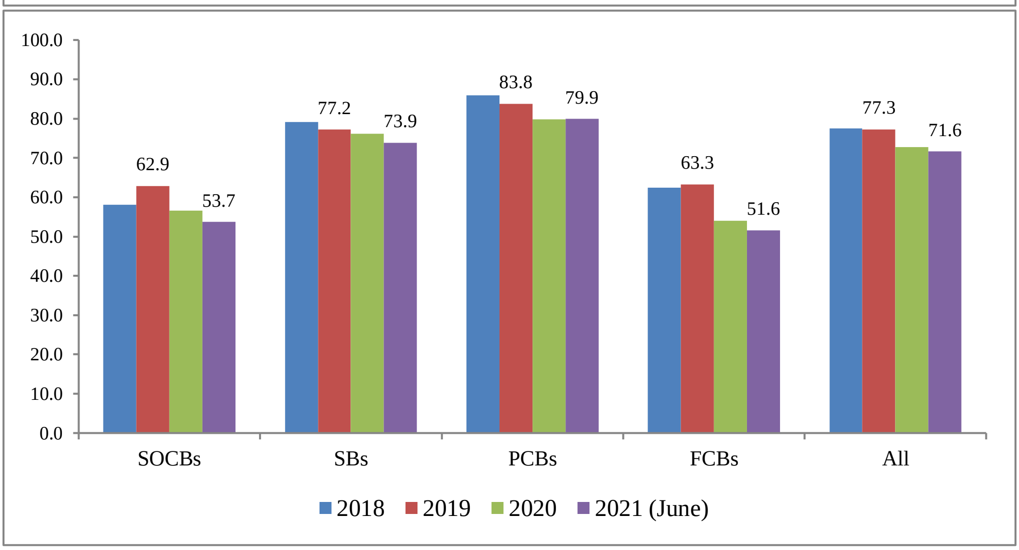


Source: *BB Quarterly*

The AD ratio is an indicator of banks' overall lending position, indicating the liquidity condition of the banking system. The trend of the AD ratio is shown in Figure-8, which indicates that it was highly volatile during the period from March 2019 to June 2021. The ratio was 78.30 per cent in March 2019 and declined to 71.6 per cent in June 2021 with some fluctuations. The recent declining trend of the AD ratio is because of the declining credit demand due to the Covid-19 pandemic, which is consistent with the liquidity surplus shown in Figure-5. This excess liquidity is a problem for the treasury department of a bank.

Figure-8: Comparison of Advance-Deposit (AD) Ratio of Banking Sector





Source: *Financial Stability Report, BB*

The AD ratio of the FCBs group (51.6%) was the lowest in June 2021, followed by the SOCBs group (53.7%). This can be explained by the fact that the FCBs are more careful in selecting the borrower for providing credit to their client. In contrast, the ratio is highest for the PCBs group (79.9%), although they are below the regulatory limit of 87 per cent. The PCBs are relatively aggressive in selecting the borrower, and as such, they are more exposed to adverse selection problems. The AD ratio of SBs was 73.9 per cent in June 2021 (Figure-8). The main reason behind the lower AD ratio of SOCBs is the regulatory cap on their credit growth because of the lack of skill in the management of the credit portfolio. As such, they are investing more in government securities. The aggregate AD ratio reached 71.6 per cent in June 2021. This is also in line with the outcome of the deposit and credit growth as shown in Figure-6.

Major Highlights of the Money Market

The major highlights of the money market are summarized in Box-1.

Box-1: Major Highlights of the Money Market

- BB undertook several policies to facilitate investment and employment during FY 2020-21, including reducing CRR, relaxing policy interest rates, and purchasing extra government securities from the banks' holdings.
- The money market was highly liquid during the period. The market observed surplus liquidity for the last year due to the Central Bank’s repo facility and stimulus packages. Excess liquidity in the money market shows a turn-around during the last 3 months.
- The call money market was relatively tight during the first quarter of 2020. The call money rate fell sharply from 5.01 percent in June 2020 to 1.79 percent in December 2020. The call money rate was around 1.00 percent from Jan-21 to July-21 due to excessive liquidity in the market. However, call money rates started moving upwards in H2 of 2021 due to open market operations conducted by the central bank and stood at around 2.0 percent in September 2021. Moderate volatility is expected towards the end of 2021.
- Capturing the market interest rate in ALM decisions like change in deposit interest rate was a bit difficult since clientele were not ready to accept the low deposit interest rate, whereas the interest rate of the National Savings Certificate was quite high.

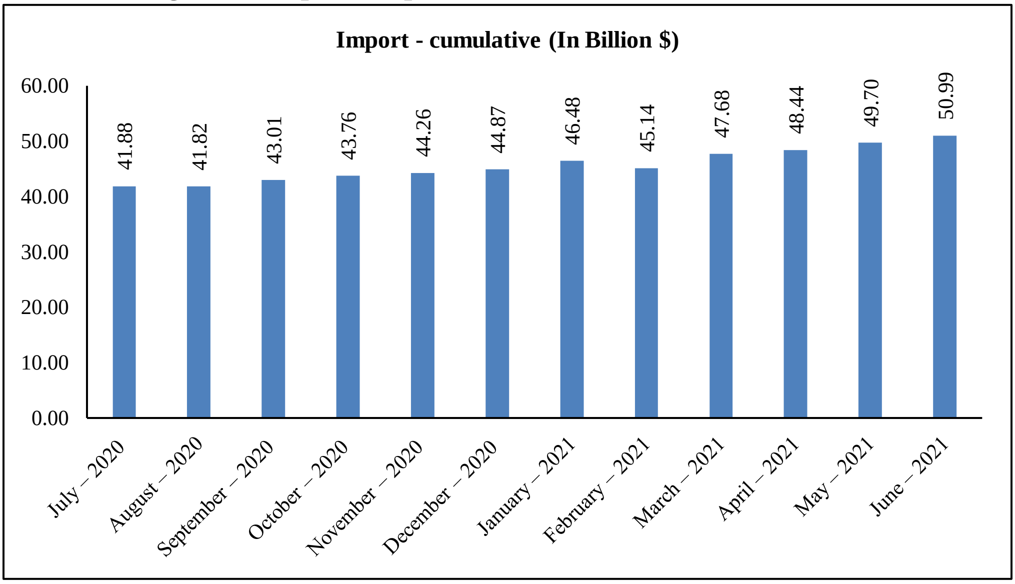
- Sluggish private sector credit growth added extra piles of idle money. The deposit growth was above the credit growth which caused to create excess liquidity in the market.
- Bangladesh Bank decided to accept bids for Bangladesh Bank Bills in order to mop up surplus liquidity from the circulation. Yields of all sorts of treasury instruments started to climb and broke a yearlong suppression from loads of surplus liquidity.
- Although BB increased the limit of the Advance-Deposit (AD) ratio to 87 percent, the ADR was slightly decreased during the period due to the Covid-19.
- The introduction of EDS Money, the electronic platform for money market transactions, was a significant leap for Money Market.
- All the Shariah Based Banks are dipped in a huge stack of liquidity that cannot be circulated in the mass market. Except for (i) private credit growth (ii) issuance of Sukuk and (iii) $ purchase from BB that liquidity is likely to sustain within the arena of Shariah Banking.

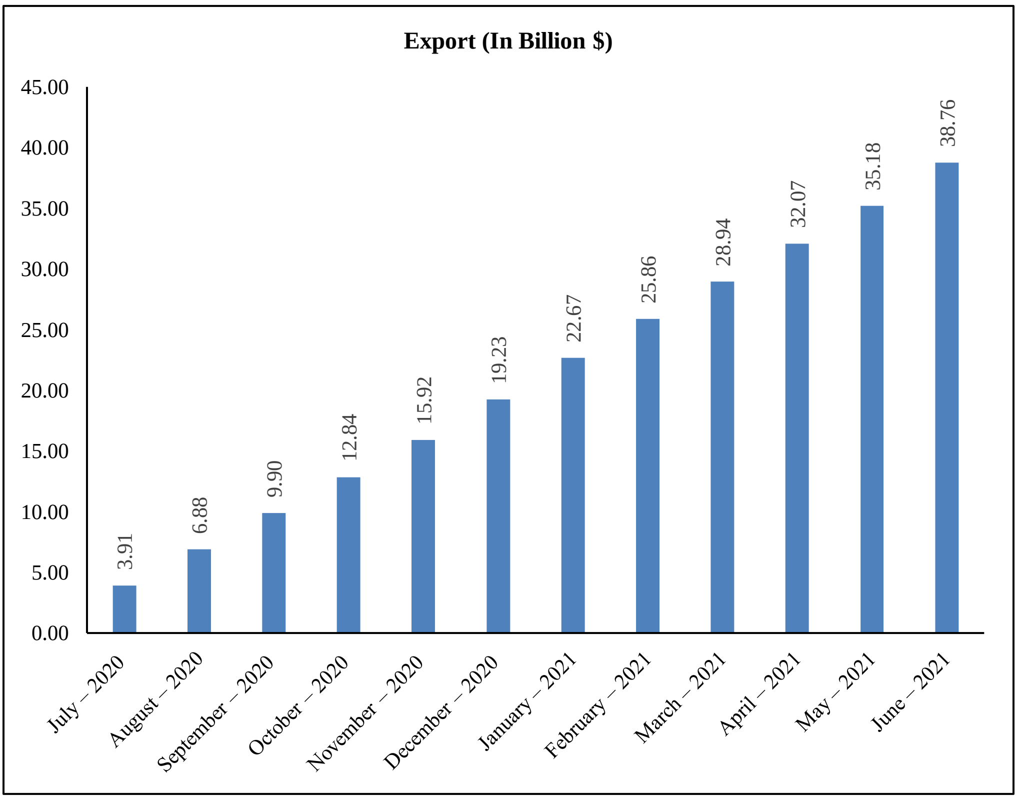
Source: *Survey Result*

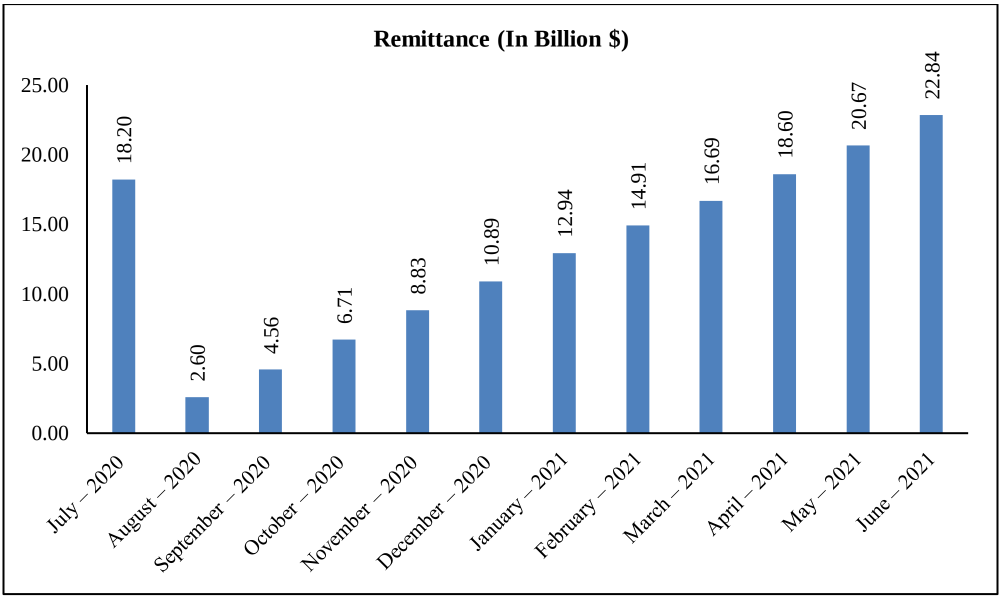
5.2 Treasury Activities Associated with Foreign Exchange Market

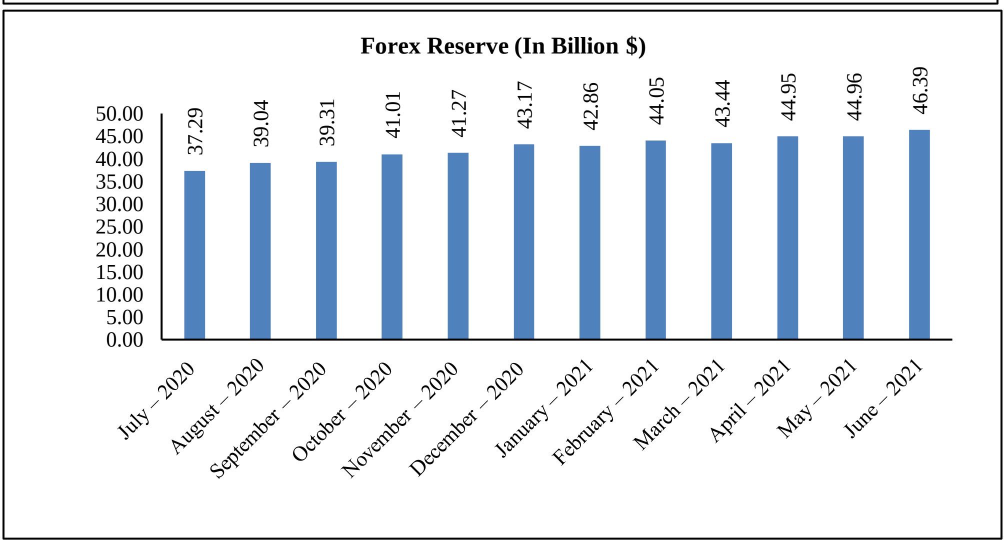
The foreign exchange market is mostly dominated by the inter-bank foreign exchange market where the export proceeds and other foreign exchange earnings such as workers' remittances, service payments, and capital account receipts are dealt with. Another FX market is the curb market which mainly deals in FX with the NRBs and foreign visitors.

Figure-9: Import, Export, Remittance, and Forex Reserve







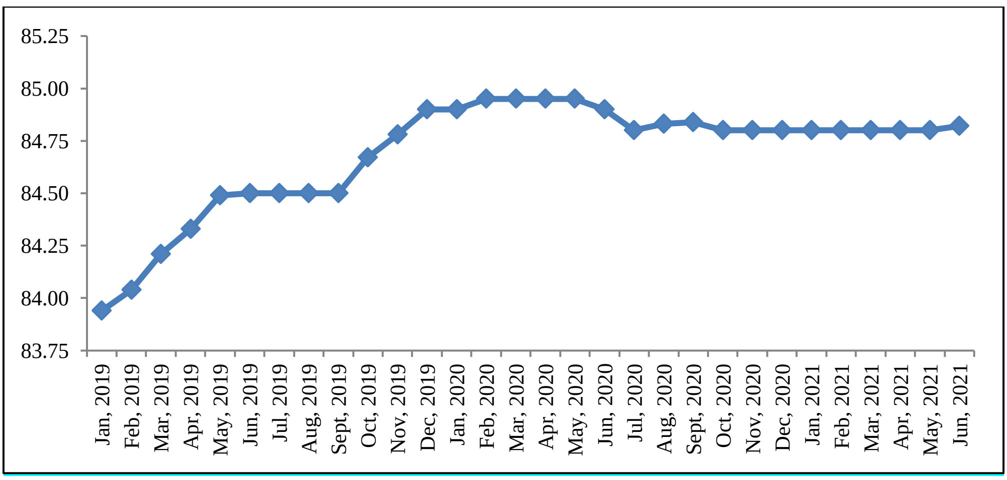


Source: *Bangladesh Bank*

The foreign exchange desk in the bank manages the foreign currency demand and supply. Export procceds and remittances are the main sources of FX for the banks. Import payments are the major use of foreign currency by the banks. In Bangladesh, the foreign exchange business was also severely affected by the Covid-19 pandemic. In FY21, outstanding amount of import payment was gradually increasing and reached $ 50.99 billion. Export business has also increased throughout the period. In contrast, the incoming remittance has recorded an all-time high growth, although this growth is temporary as opined by the expert bankers in the FGD. Due to such high remittance inflow, increased growth of export, and low import payment due to deferred LC, the foreign exchange reserve of Bangladesh has reached its all-time high at US$46.39 billion in June 2021. The status of imports, exports, remittances and forex reserves in FY20 are shown in Figure-9.

In January 2019, the exchange rate for $ against BDT was Tk.83.94 (Figure-10). The BDT continuously depreciated against the $ throughout 2019 and 2020 until it changed the direction from May 2020, due to rising demand for US dollar. The BB to sell US dollar to tackle devaluation of taka. The situation changed in the recent period, especially during June 2020 to June 2021 because of the excess supply of $ resulting from lower import payments and high remittance flow. This time, Bangladesh Bank is buying $ to prevent further appreciation of BDT for protecting the exporters' interest. As a result, there has been an addition of local currency in the market, which eventually aggravated the existing surplus liquidity position of the market.

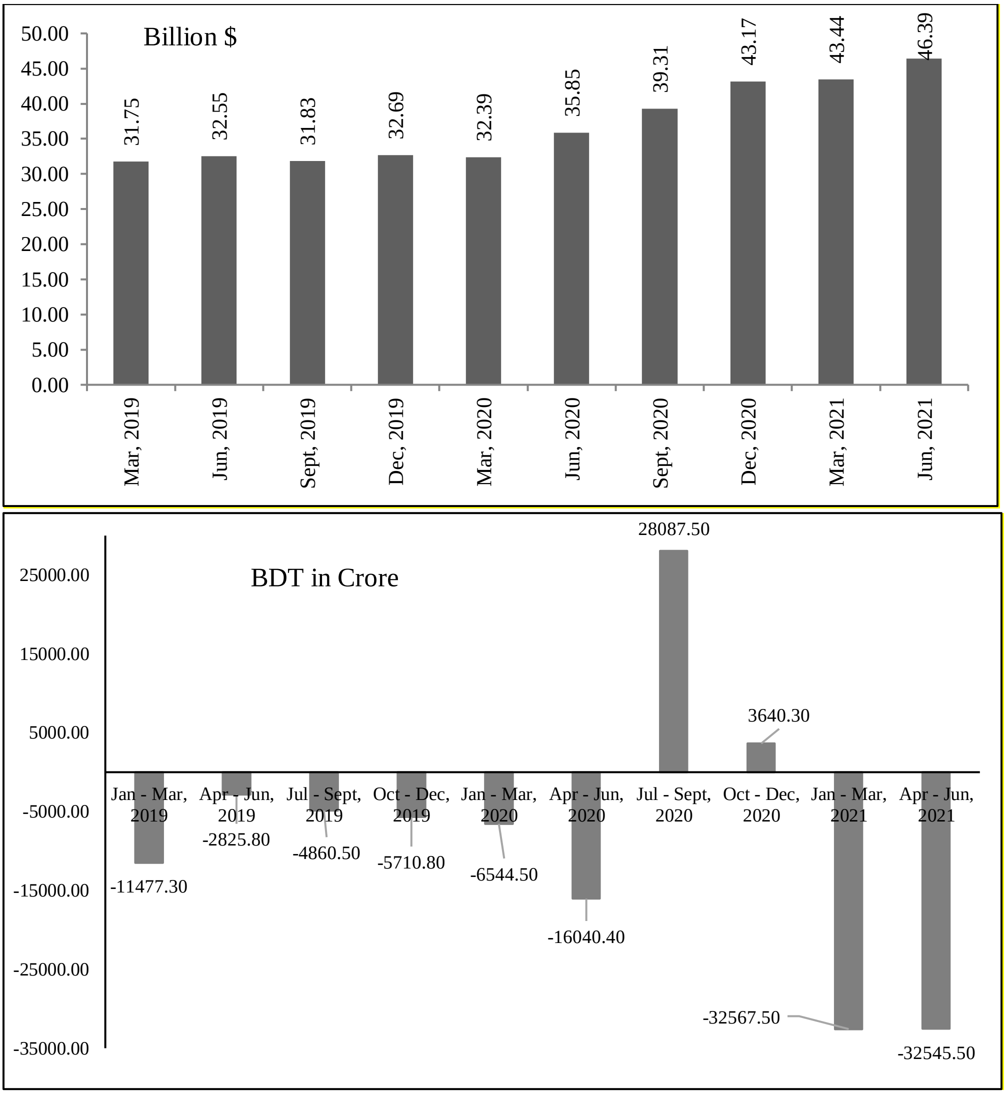
Figure-10: Movement of Weighted Average Exchange Rate



Source: *BB Quarterly*

The deficit of the current account balance for several years is shown in figure – 11. It is evident from the MPS that BB aimed to augment it's FX reserve to ensure stability and promote external sector. The external balance stood at $ 46.39 billion in June 2021 against $ 35.85 billion in June 2020s which is a reflection of an improvement.

Figure-11: Foreign Exchange Reserve and Current Account Balance



Source: *Economic Trends, Bangladesh Bank*

Major Highlights of the Forex Market

The FX market was relatively unstable during the period. The highlights of the FX market are shown in Box-2.

Box-2: Major Highlights of the Forex Market
➢ The FX market was unstable in 2019, due to the difference between the demand-supply of US dollar. BB kept selling dollars to stabilize the FX market. ➢ At present, the exchange rate is facing increasing depreciating pressure due to the declining trend of remittances, the rising price of commodities in the global market, and the end of deferral support on payments for imports. ➢ Recently, BB sold $ to commercial banks to meet up their payment obligations and to maintain a suitable NOP since there is a sudden decline in remittance flow and export proceeds. ➢ The foreign exchange reserve crossed $ 43 billion in December 2020. The figure was 48 billion in August 2021, which is the highest ever in the history of Bangladesh. ➢ Throughout 2020, the interbank market traded $-BDT at 84.80, but currently, $ is trading at 85.60 BDT. ➢ Total receipts from overseas workers' remittances in July of FY 2021-22 substantially decreased by $ 0.73 billion or 27.97 percent and stood at $1.87 billion against $ 2.6 billion in July of FY 2020-21. ➢ $/BDT SWAP was widely hampered by abundance in liquidity in both FX and local currency markets. ➢ Overall export proceeds were lower than the previous years due to the adverse situation all over the world. LC volumes were declining.

Source: *Survey Result*

5.3 Treasury Activities Associated with Fixed Income Securities Market

The outstanding amount of T-bills was Tk. 52,100 crore in June 2021, which was far below Tk. 68, 600 in December 2019 and Tk. 59, 100 in December 2020 (Table-5). Likewise, the outstanding amount of T-bonds was Tk.2,67,420 crore in June 2021 compared to Tk.178,900 crore in June 2019 and Tk.2,16,320 crore in June 2020. The total amount of government borrowing through T-bills and T-bonds increased significantly during the period. The outstanding amount of NSD certificates increased to Tk. 344,090 crore in June 2021 from Tk. 322,620 crore in December 2020 (an increase of 6.65%). As a result, the share of NSD certificates declined to 51.7 per cent in June 2020. On the contrary, the government's borrowing from the banking sector increased gradually over time. The outstanding amount of the NSD certificate recorded 51.80 per cent growth in June 2021, followed by BGTB (40.30%) and T-bills (7.90%) (Figure-12).

Table-5: Outstanding Position of Treasury-Bills, Treasury Bonds and NSD Certificates

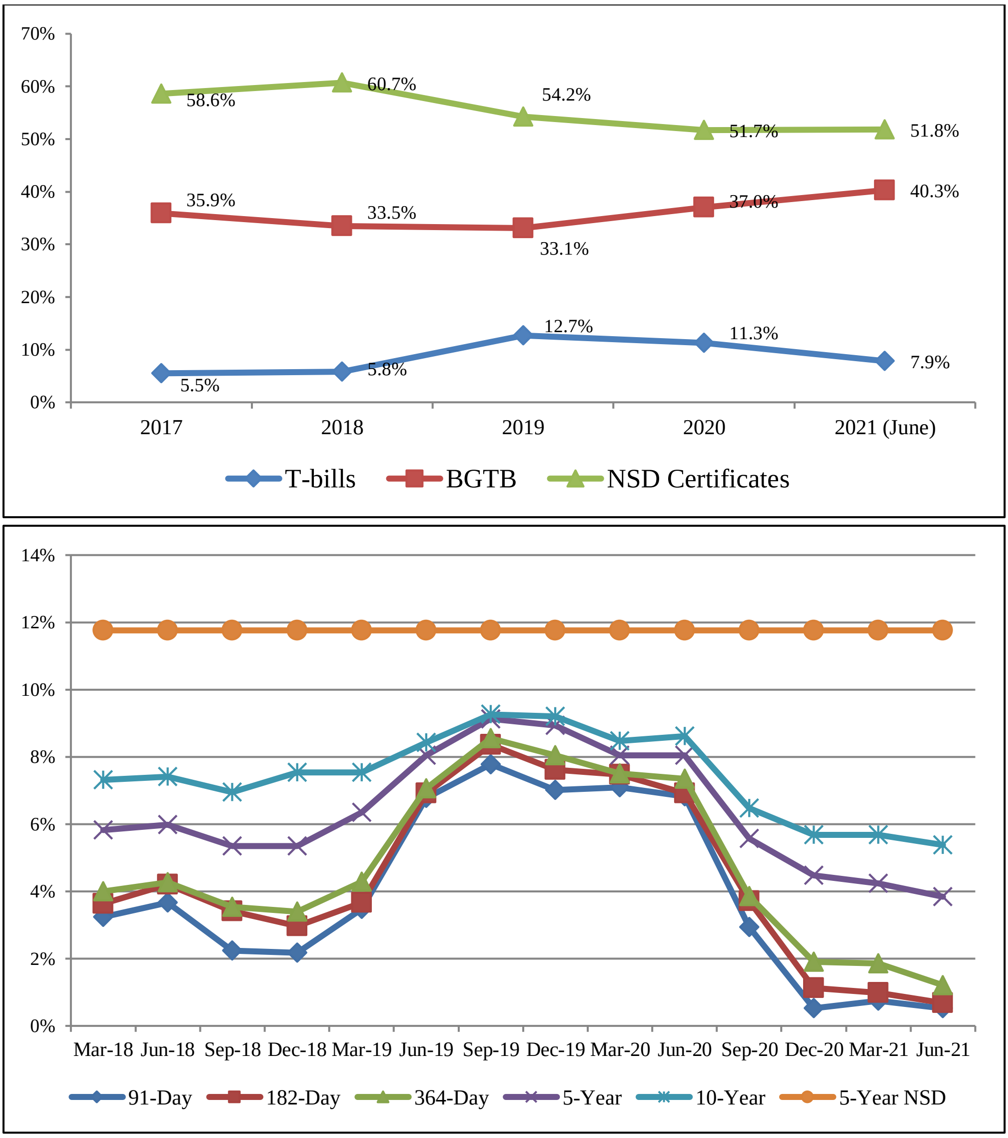
(BDT in crore)

Tenor	Outstanding Amount				
	2017	**2018**	**2019**	**2020**	**2021 (June)**
T-Bills					
28-day	-	-	-	-	-
91-day	6300	7900	14700	15600	11250
182-day	5700	6300	19800	15600	12100
364-day	8300	10900	31100	27900	28750
Sub-Total	**20300**	**25100**	**68600**	**59100**	**52100**
BGTB					
2-year	8800	13000	21200	38200	44000
5-year	30670	30170	35570	55850	56650
10-year	51250	52760	61580	80570	86570
15-year	22170	25870	31770	38420	41620
20-year	19290	22890	28790	35990	38590
Sub-Total	**132180**	**144690**	**178900**	**249020**	**267420**
NSD Certificates	215060	262760	293140	322620	344090
Total	**367540**	**432550**	**540640**	**630740**	**663610**

Source: BB Quarterly

The weighted-average-yields of govt. securities of different maturities, except 5-year NSD, sharply declined during June 2020 – December 2021 and continued falling until June 2021 at a decreasing rate though (Figure-12). This is a signal to the market that future interest rates are going to decrease. The yield is expected to decline further because of the implementation of the lending rate cap otherwise banks will invest more in Treasury securities rather than investing in the real sector.

Figure-12: Share of Government Securities and Yield on Government Securities



Source: *BB Quarterly*

The overall yield on short-term treasury bills, e.g. 91-day T-bill decreased to 0.52 percent at the end of June 2021 from 6.83percent at the end of June 2020. The rates of 182-day and 364-day treasury bills also decreased in June 2020. The same trend was observed in the case of 5-year and 10-year Treasury bonds. The yield on the NSD certificate, on the other hand, remained the same at the 11.76 per cent level.

Major Highlights of the Fixed Income Securities Market

The key issues of the fixed income securities market are highlighted in Box-3.

Box-3: Major Highlights of the Fixed Income Securities Market
➢ Central Bank issued BB bills of different tenors besides Treasury Bill and Bond to wash away the excess liquidity in the market.
➢ The yield of fixed income securities continued to trend downwards following the breakout of coronavirus in March 2020, and the central bank took various policy measures to support the economy by providing lower-cost funds. By June 2021, the yield of treasury bonds stood in the range of 2.57 percent to 6.07 percent.
➢ The outstanding amount of both T-bill and T-bond increased but T-bond increased significantly in 2020 compared to the previous year. The share of NSC declined significantly.
➢ An upward trend in the yields of fixed income securities is observed after the second wave of the Covid-19 Pandemic. At present, yields have started to go up with an economic rebound insight and the yield of treasury bonds stand in the range of 4.13 percent to 6.50 percent.
➢ There was no depth in secondary trading. The secondary market was not that much vibrant due to excess liquidity in the money market.
➢ Instruments were unwillingly kept in the trading book due to long investments in securities resulting from liquidity pressure. As such, Banks are now more exposed to price risk.
➢ Bangladesh Bank announced the auction amount in its auction calendar. The figure does not match with the actual amount of auction which is a big challenge for the treasurer as it hampers the planned fund management of the bank.
➢ The government Published only monthly basis auction calendar instead of a quarterly/half-yearly auction calendar which was a big challenge for investment in the Fixed Income Securities.
➢ Banks started to issue perpetual bonds to manage Additional Tier-1 capital.

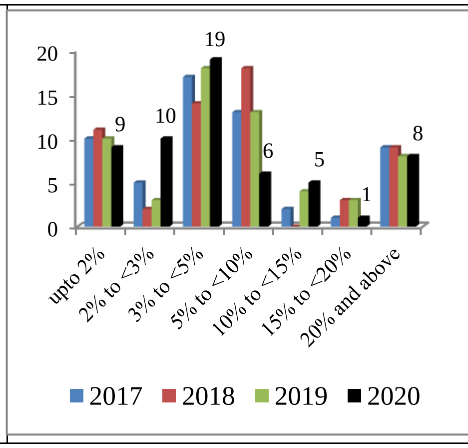
Source: *Survey Result*

5.4 Treasury Activities Associated with Management of Balance Sheet Indicators

The gross NPL ratio was 8.2 percent at the end-June 2021 against 7.7 percent at end-June 2020 (Figure-13), despite the regulatory forbearance by the Bangladesh Bank during Covid-19 regarding relaxation of the classification norm up to September 30, 2020. It is a great relief for the borrowers as they are getting some time to recover from the shock of Covid-19. This regulatory forbearance is also an opportunity for banks, as they can discuss with the borrower for possible recovery without maintaining any provisioning.

Figure-13: Gross NPL Ratio by Type of Banks (%) and Distribution of Banks

Bank Groups	2017	2018	2019	2020	2021 (June)
SOCBs	26.5	30.0	23.9	20.9	20.6
SBs	23.4	19.5	15.1	13.3	11.4
PCBs	4.9	5.5	5.8	4.7	5.4
FCBs	7.0	6.5	5.7	3.5	3.9
All Banks	**9.3**	**10.3**	**9.3**	**7.7**	**8.2**



Source: *BB Quarterly*

Figure-13 shows gross NPL ratio by type of banks where the SOCBs have the highest NPL while the FCBs have the lowest NPL. Table-6 shows the amount of provision kept by banks. The provision shortfall is a big concern for the banking sector.

Table-6: Amount of Provision

(BDT in crore)

	2016	2017	2018	2019	2020
Loan Loss Required Provision	36210	44300	57040	61,310	63,900
Loan Loss Actual Provision	30740	37530	50430	54,660	63,770
Surplus/(Shortfall) provision	(5470)	(6770)	(6610)	(6,650)	(1,300)
Provision Maintenance Ratio	84.9	84.7	88.4	89.2	99.8

Source: *BB Quarterly*

Table-7 shows the Return on asset (ROA) and return on equity (ROE). The SOCBs and SBs had ROA and ROE). Both ROA and ROE of PCBs ROE decreased slightly in 2020. Likewise, both ROA and ROE of FCBs decreased. The aggregate figures of both ROA and ROE decreased significantly in 2020.

Table-7: Profitability Ratios by Type of Banks (%)

Bank Groups	ROA		ROE	
	2019	2020	2019	2020
SOCBs	-0.6	-1.1	-13.7	-29.6
SBs	-3.3	-3.0	-17.0	-13.9
PCBs	0.8	0.7	11.2	10.2
FCBs	2.3	2.1	13.4	13.1
All Banks	**0.4**	**0.25**	**6.8**	**4.28**

Source: *BB Quarterly*

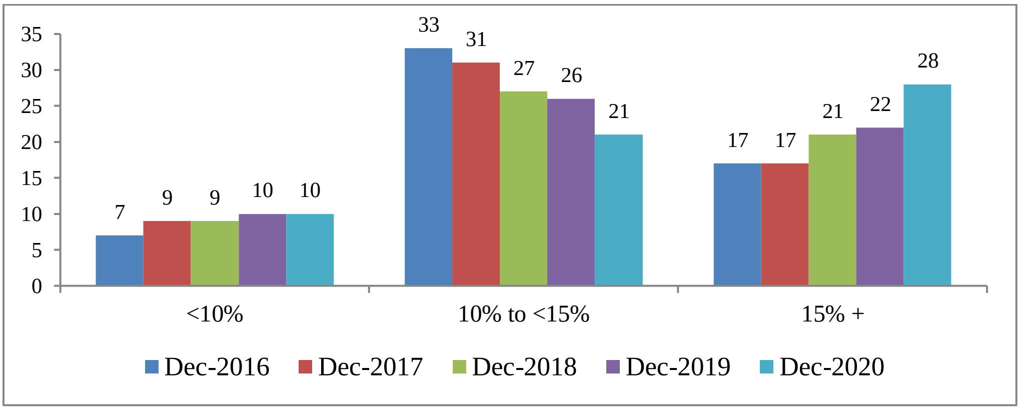
Capital adequacy is critical to ensuring the financial stability of a bank. The aggregate CRAR of the banking sector was 11.57 percent in June 2021, which was below the target level of 12.5 percent compared to 11.63 percent in June 2020. Although the aggregate ratio slightly increased in June 2021 compared to June 2020, the outcome is not comfortable from the stability point of view. From Table-8, it is evident that both private commercial banks (PCBs) and foreign commercial banks (FCBs) were successful in maintaining the required CRAR. The position of the FCBs is quite strong, with their CRAR reaching more than twice the required level. On the contrary, the SOCBs achieved only half of their required CRAR. The capital shortfall of SOCBs could be worse if govt did not capitalise them.

Table-8: Capital to Risk-Weighted Asset Ratio (CRAR) by Type of Banks (%)

Bank Groups	2016	2017	2018	2019	2020	2021 (June)
SOCBs	5.86	5.04	1.9	4.99	4.34	6.82
SBs	-33.67	-35.45	-31.7	-32.0	-32.92	-32.16
PCBs	12.36	12.52	12.8	13.62	13.96	13.26
FCBs	25.37	24.90	26.0	24.45	28.24	28.46
All Banks	**10.80**	**10.83**	**10.5**	**11.57**	**11.64**	**11.57**

Source: *BB Quarterly*

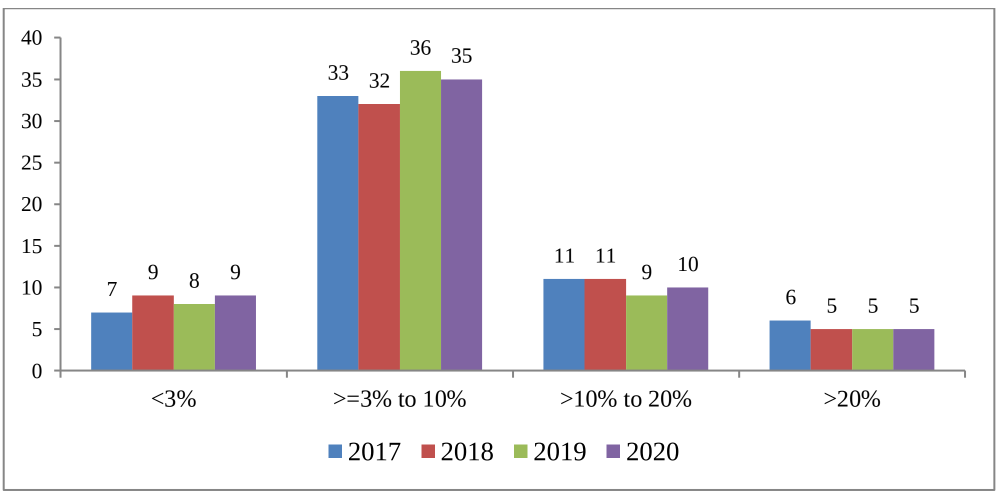
Figure-14: Distribution of Banks by Capital to Risk-weighted Asset Ratio



Source: *FSD, Bangladesh Bank*

Figure-14 shows the capital to risk-weighted asset ratio (CRAR). Ten banks has failed to maintain their required CRAR of 10 percent in 2020 while others met their capital mrequirement well. It is great to see that some 28 banks have been doing exceptionally well, exceeding the 15 percent mark.

Figure-15: Leverage Ratio of Banks



Source: *FSD, Bangladesh Bank*

Figure 15 shows the leverage ratios of banks. The minimum reqired leverage ratio was 3.0 percent. Out of 59 banks, 50 banks maintained a leverage ratio of 3.0 percent or higher in 2020. However, it is a matter of concern that 9 banks fell short of the target in 2020.

Major Highlights of the Selected Balance Sheet Indicators

The major highlights of the balance sheet indicators are summarized in Box-4.

Box-4: Major Highlights of the Balance Sheet Indicators
➢ NPL ratio declined in recent times due to the Covid-19 linked regulatory forbearance. The overall asset quality is still not in a good shape as reflected in the NPL ratio. ➢ 38 banks had an NPL ratio of less than 5 percent in 2020 while 14 banks had double-digit NPL ratio. ➢ Despite an increase in the amount of required provision and provision maintenance ratio in 2020, the provisioning shortfall was still BDT 1,300 crore which is a big concern. ➢ Both ROA and ROE decreased in 2020 due to the widespread aggression of the Covid-19. ➢ Aggregate CRAR remains the same although CRAR of SOCBs increased because of the capital injection to the SOCBs by the government for improving their financial position. The performance of PCBs and FCBs was quite satisfactory in terms of their CRAR although the ratio declined slightly for PCBs. The CRAR of SBs is still in negative territory. ➢ 49 out of 59 banks successfully met the required CRAR while 10 banks failed to do that.

Source: *Survey Result*

5.5 Status of Capital Market

Bangladesh’s capital market is made up of two markets: the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE) (CSE). For both the private and public sectors, these are the major sources of equity financing. Bangladesh, although being a developing country, has achieved tremendous economic progress via the use of technology, substantial human resources, and a stable business climate. Bangladesh is one of the fastest-growing countries in the world. Covid-19 has harmed global GDP. Business activity is slowing, and the economy is contracting. This has inevitably had a detrimental impact on investment flow in Bangladesh; as potential investors are wary of market uncertainty, and current investors are restricting their resource mobilization. However, Bangladesh remains one of the few economies with positive growth in 2020, suggesting that it is more of a macroeconomic robust, while the world economy is expected to grow at - 4.4 percent on average.

Bangladesh has been one of the top-five robust economies in the face of pandemic threats, being considered as one of the world's most promising economies according to the global business community. Bangladesh is also attractive to foreign businesses, particularly manufacturing firms, because of its low input costs, low wages, and low energy costs, along with its abundant human resources, good governance, international transportation infrastructure, and other factors that encourage foreign investment and expand the financial market. Yet, in 2020, Bangladesh's capital market has experienced a severe unfavourable shift in several industries. This review compares the state of the capital markets in 2020 to the state of the preceding years.

At the year's end, daily turnover surpassed BDT 15,000 million for the first time. Previously, the capital market had been in a pessimistic mood for a long time, with investors perplexed by the index's persistent decline as a result of the coronavirus epidemic in the nation. Before the countrywide shutdown, regulators made steps to limit the free collapse of the stock price. Investor trust has been harmed because of the market's protracted shutdown and the Bank sector's decision to postpond dividend declaration of big size. In 2020, Bangladesh's capital market fared admirably. A slew of IPOs in the second half of the year boosted the capital market's vibrancy by unloading primary shares worth TK 8.68 billion, the highest in the past five years. The peak index of 2020 is 5900, compared to the peak index of 5950 in 2019, which is 50 points higher than the 2020 peak index.

The pandemic has had a detrimental impact on several industries in Bangladesh, including garments, banks and non-bank financial institutions, and real estate. On March 18, immediately after the shutdown, the DSE index dropped to 3,603.95, from 4,768 on February 17. The cancellation of RMG products and the long-term lockout significantly reduced the overall exports. The major bourse's trade value drops to BDT 430 million, the poorest in the previous 13 years. Trading and capital market investment were also impacted by market instability. Even though Bangladesh appears to be less affected by the epidemic in comparison to others; according to Bangladesh Bank's projections, GDP would grow by 3.80 percent, exports would fall by 17.50 per cent, and imports would fall by -8.80 per cent. This forecast predicted a sharp drop in the country's economic growth.

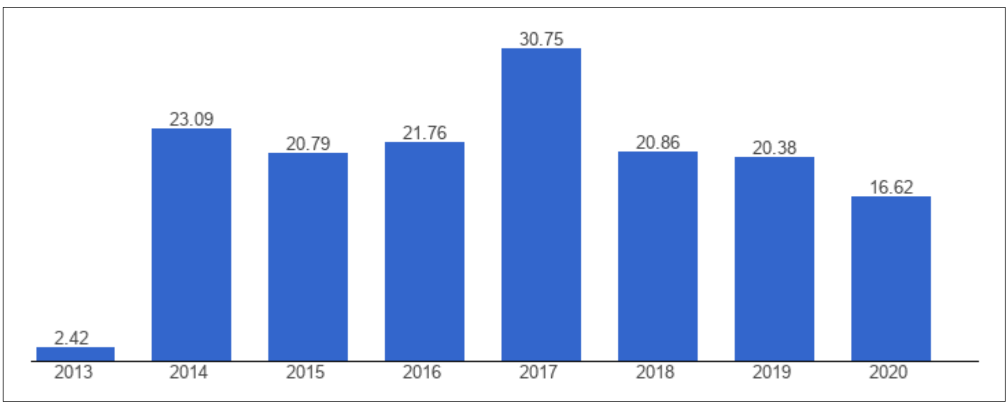
Table-9: Comparative Market Facts in Bangladesh

	2020	2019	Change	Change
DSEX	5402	4453	949.1	21.3%
DS30	1964	1513	450.6	29.8%
DSES	1242	1000	242.3	24.2%
Market Cap (BDT million)	4482	3396	1086.8	32.0%
Average Turnover (BDT million)	6489	4812	1677.3	34.9%
Average Turnover (BDT million)	235	137	98.0	71.3%
Market P/NAV	1.7	1.4	0.3	21.0%
Market Forward P/E	13.5	9.19	2.6	21.5%

Source: *DSE*

Average Turnover and Market Forward P/E: Between 1993 and 2020, Bangladesh's average stock market turnover ratio was 18.83 percent, with a lowest of 2.42 percent in 2013 and a peak of 62.01 percent in 1999. The most recent estimate for 2020 is 16.62 percent. The average turnover was BDT 6489 million in 2020 and BDT 4812 million in 2019. In 2020, the world average turnover ratio based on 62 countries was 37.35 percent.

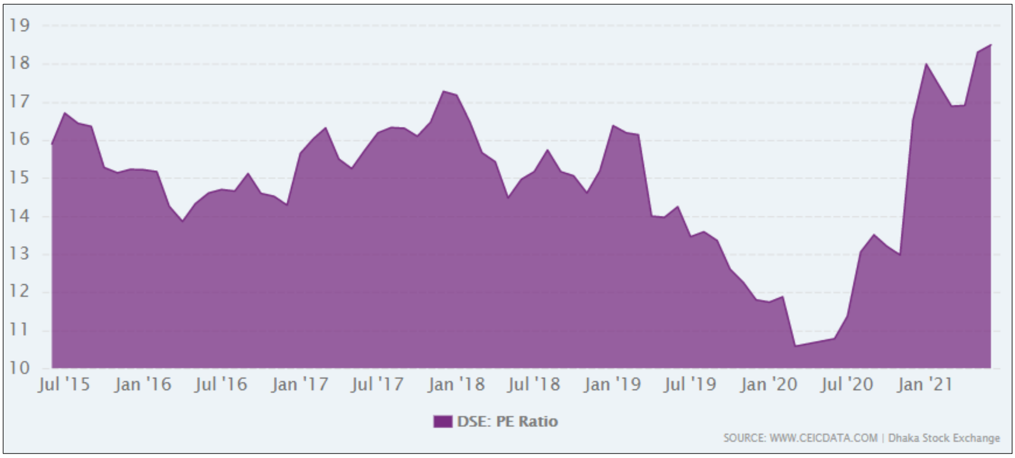
Figure-16: Stock Market Turnover Ratio



Source: *The Global Economy*

Market P/E ratio is calculated by dividing the market average price by market average earnings. In June 2021, PE ratio data was 18.5 times. The average PE ratio, updated weekly with 246 observations, was 15.045 times from November 2000 to June 2021. The PE ratio peaked at 30.580 times in February 2010. The figure below shows that in 2020, there was a drastic fall in the market P/E ratio due to the covid pandemic and from 2021, the market started to rise again resulting in an increase in the market P/E ratio.

Figure-17: Stock Market PE Ratio



Source: *www.ceicdata.com, DSE*

The pandemic has had a detrimental impact on several industries in Bangladesh, including garments, banks and non-bank financial institutions, and real estate. On March 18, immediately after the shutdown, the DSE index dropped to 3,603.95, down from 4,768 on February 17. The cancellation of RMG products and the long-term lockout will significantly reduce overall exports. The major bourse's trade value drops to BDT 430 million, the poorest in the previous 13 years. Trading and capital market investment were also impacted by market instability. Although Bangladesh appears to be less affected by the epidemic in comparison to others, according to Bangladesh Bank's projections, GDP would grow by 3.80 per cent, exports would fall by 17.50 per cent, and imports would fall by -8.80 per cent. This forecast predicted a sharp drop in the country's economic growth. Because of global economic distortions, remittances, which are one of the key economic contributors, would be plummeted. Bangladesh's overseas trade market will also be affected. Customers' demand will change significantly, which will influence the clothing industry in particular. The government offered a variety of programs to assist the affected industries as a safeguard against potential consequences. Even though the pharmaceutical and textile industries have recovered quickly with the government's incentives; textile, real estate, banks and NBFIs will take a long time to recover since the overall economic condition had been hit seriously.

5.6 Findings based on Focus Group Discussion (FGD)

The key findings based on the Focus Group Discussion (FGD) with 24 representatives of treasury are summarized in Box-5.

Box-5: Key Findings from the Focus Group Discussion
• All the participants opined that the growth of credit to the private sector declined for the last 18 months due to Covid-19. However, the situation is improving and the credit demand is gradually increasing. It is expected that the economic activities will reach the full momentum in 2022. • Everyone has agreed that the market liquidity condition is gradually tightening because growing economic condition in the post Covid-19 regime. Now the major concern is the availability of the required liquidity to meet the market demand. • All the participants of the FGD (100%) expressed their deep concern about the fixation of deposit rate following goverment's directive. Increase in deposit rate will reduce the net interest margin (NIM), which will ultimately affect the net profit of the bank. Reduction in profit will automatically reduce the retained earning and capital growth. Low capital growth will reduce the credit growth which will eventually hit the GDP growth and employment. • At this moment, Bangladesh Bank is using various mechanism to control the surplus liquidity in the market. All the FGD participants (100%) are in favor of introducing Reverse Repo facility. • Most of the participants (90%) are worried about the foreign exchange transaction in the days to come. As per the FGD participants, export growth is steady, remittance growth is declining, import growth is increasing along with the global commodity price. As a result, availability of foreign exchange will be the key concern for the commercial banks. • BB purchased almost $ 8 billion from the market during the Covid period, which stabilize the FX rate. BB also sold $ 1.2 billion in recent time to ensure the stability of the forex market. However, market intervention by BB for controlling the forex market may distort the market. • A bank must upload the daily exchange rate at FX market monitoring portal of Bangladesh Bank on the daily basis. If there are any changes of daily exchange rate during the business day, new rates must be uploaded again in the portal. However, when any transaction is settled beyond published rate, these rates are not reported at FX market monitoring portal of Bangladesh Bank by many commercial banks as expressed by many participants (75%).

- FGD participants are in favor of market driven interest rate and forex rate. Deposit rate floor being set following government directive and lending interest rate ceiling is fixed by the BB, which is supposed to be determined by the treasury department. Similarly, forex rate are also managed by the central bank. These initiaitves by BB actually undermines the responsibilities of the treasury people as opined by most of the participants (80%)
- Lack of knowledge and expertise is one of the major hindrances for the development of the market. Capacity development of the treasury people, as well as senior management regarding the treasury related issues, is essential as mentioned by most of the participants (78%).
- About one-thirds of the participants said that a vibrant secondary bond market is essential to ensure market liquidity. Both instruments and infrastructure are required to ensure an active secondary market.
- Most of the participants (90%) opined that an open market operation by BB needed to stabilize the FX rate and liquidity.
- Majority of the participants (70%) expressed their concern about the significant changes in yield on government securities as the bank with high G-Sec holdings incurs substantial loss against their HTM assests.
- Commercial Banks provide higher conversion rate than the inter-bank rate and provide additional subsidy to attract more foreign currency from exchange houses. Theoretically, a bank must not procure foreign currency from an exchange house at a price higher than the inter-bank market nor provide additional subsidy to the remitter. As a result, the inflow of foreign currency from exchange house are limited to a certain number of banks and they can manipulate the inter-bank market when there is a demand surge in the market.
- Introducing Islamic bonds (Sukuk) is necessary for solving the liquidity problem of the shari’ah based banks as expressed by the participants of shari’ah based banks. A technical committee is already formed by the BB, which is working for the issuance of Sukuk.

6. Key Findings and Recommendations

The review study has attempted to find out the overall activities, status, and trends of the treasury operations of banks. The review has come up with the following observations and recommendations.

One, Bangladesh Bank has imposed ceiling for the lending rate. Deposit rate is also tagged with the inflation. The objective of such intervention by the central bank is understandable. Introducing lending cap is to ensure the single digit interest rate so that cost of business become economical. To the contrary, Bangladesh Bank has taken the initiatives to fix the bank's interest rate of term deposits of the individual client with the intention of protecting the interest of the depositors. However, this is a double edge situation for the commercial banks as this will reduce the banks spread significantly. Banks are required to increase their efficiency in various activities to handle this situation. In regards to cost reduction, the possible options may be the reduction of unnecessary use of stationery, conveyance, and refreshment; publishing the annual report to a limited number to the extent possible; arranging virtual Board meetings and annual general meetings; hiring office space at a reasonable rent; avoiding luxuries regarding decoration of branches/head office, etc.

Two, Bangladesh Bank has provided necessary policy supports to ensure market liquidity during the Covid-19 regime. However, the market liquidity is gradually tightening as the economic condition has started to turn around in the post Covid-19 period. The economy is expected to get the full momentum in the coming period as the pandemic seems to be under control. The liquidity of the market might be affected in the near future because of high level of NPL, low level repayment and recovery of NPL, low remittance flow, increasing trend of import, lower than expected export, etc. Necessary remedial measures like adjustment of the monetary policy instruments in line with the market liquidity condition by the concerned authorities might be needed to overcome the liquidity problem in the post-Covid-19.

Three, The benchmark of daily exchange rate should be derived from the actual demand and supply of foreign currency in the inter-bank market, and the published daily exchange rate of the commercial banks should be different from one another. However, moral suasion by the Bangladesh Bank restricts commercial banks to publish daily exchange rate (Cap for BC Selling Rate and Floor for their TT Clean Buying Rate) beyond their prescribed level. As such, published exchange rate of all the commercial banks are the same every day. Alike daily exchange rate, inter-bank rates (both spot and forward) are also being capped by the Bangladesh Bank, which forces the commercial banks to buy or sell $ within the prescribed rates set by the regulator. No doubt BB follows managed floating system to control the forex market for the greater interest of the country.

Four, The forex reserve of the country is gradually increasing and it reached to a record high in August 2021 ($ 48.06 billion). At that time the exchange rate was BDT 85.2/$. From the data, it is evident that taka lost its value even with the increased amount of forex reserve. The country observed unexpected inflow of remittance and low growth of import during the Covid-19 period. These helped increase the forex reserve. The Central Bank had to purchase huge amount of $ from the market to keep the exchange rate stable. Now the situation has started to change specially when the payment schedule of deferred LC is getting closure. It is to be noted that the BB has given additional time period to settle the import liabilities of deferred LCs in the Covid-19 period. Undoubtedly, deferred LC payment will create extra pressure on the demand of $. Bangladesh Bank needs to provide necessary policy support as well as necessary intervention for ensuring the stability of the forex market.

Five, Bangladesh Bank declared several stimulus packages for the Covid-19 affected borrowers so that they can survive during the pandemic. Commercial banks were given the responsibilities to disburse the loans under stimulus packages. However, commercial banks are facing huge uncertainties in getting their money back. This might bring an additional burden of NPLs for the banking industry if the growing credit risk in this Covid-19 environment is not managed appropriately. The chance of adverse selection and moral hazard can increase as the opportunists can take the situational advantage. As such, banks must follow the stringent process for selecting the borrower to avoid the adverse selection problem. Moreover, there might be rising NPLs due to moral hazard propelled by the pandemic. The right kind of incentives, both positive and negative, is required to deal with the moral hazard problem. Bangladesh Bank may undertake necessary initiatives for formulating necessary regulations in this regard.

Six, The yield on government securities (G-Sec) was volatile for last couple of years, which creates uncertainities in the profitability of banks with high holding of G-Sec. The secordary bond market can solve this problem to some extent. The secondary bond market in Bangladesh is shallow and almost non-existent. Thus, it affects the liquidity of the overall financial market. The survey result of this study indicates for developing an active secondary bond market, measures including having a benchmark yield curve, a pool of funds like provident fund, pension fund, superannuation fund, and gratuity, etc. are needed. Recently, Bangladesh Bank has directed the commercial banks to create a "Government Securities Investment Window" under their respective treasury department for effective services to the clients who want to deal in treasury bills and bonds. These will not only increase market liquidity and depth but also make the market more vibrant.

Seven, The review found that there is an acute dearth of bankers who are well-conversant with the treasury operations. The same situation applies in the case of senior management, who deals with treasury related issues. It is also necessary to strengthen the treasury back office for efficient management of treasury activities. All these problems are the major hindrances for the development of the market. The commercial banks in Bangladesh are running after a few expert treasury officials, but no significant initiatives were taken for developing well-educated personnel for the treasury department. Banks provided necessary training to the concerned officials for enhancing their professional skills, which, however, was not sufficient. This problem calls for due attention from all the stakeholders, including Bangladesh Bank. More initiatives like advanced training and capacity development programs can be arranged to overcome the above-mentioned problems.

References

Ahmed, Md. Nehal, ReefatZamanShourov, Mehdi Zaman and ArequlArefeen (2019), “Treasury Operations of Banks”, *Banking Review Series*, BIBM, Dhaka.

Ahmed, Md. Nehal, ReefatZamanShourov, Mehdi Zaman and ArequlArefeen (2018), “Treasury Operations of Banks”, *Banking Review Series*, BIBM, Dhaka.

Ahmed, Md. Nehal, Md. ZakirHossain, Mehdi Zaman and ArequlArefeen (2017), “Treasury Operations of Banks”, *Banking Review Series*, BIBM, Dhaka.

Ahmed, Md. Nehal, Md. Alamgir, Mehdi Zaman, and ArequlArefeen (2016), “Treasury Operations of Banks”, *Banking Review Series*, BIBM, Dhaka.

Ahmed, Md. Nehal, Md. Alamgir, Mehdi Zaman, and ArequlArefeen (2015), “Treasury Operations of Banks”, *Banking Review Series*, BIBM, Dhaka.

Bangladesh Bank (2012, 2018), “Risk Management Guidelines for Banks”, Department of Off-Site Supervision, Dhaka, February.

Bangladesh Bank (2003, 2016), “Core Risk Management Guideline on Asset Liability Management”, Dhaka.

Bangladesh Bank (2003, 2016), “Core Risk Management Guideline on Foreign Exchange Risk Management”, Dhaka.

Bangladesh Bank (2003, 2016), “Core Risk Management Guideline on Internal Control and Compliance”, Dhaka.

Bangladesh Bank, *BB Quarterly*, various issues.

Bangladesh Bank, *Economic Trends*, various issues.

Bangladesh Bank, *Financial Stability Report*, various issues.

Bangladesh Bank, *Monetary Policy Statement*, various issues.

Bangladesh Bank, *Quarterly Financial Stability Assessment Report*, various issues.

BIS (2012), Core Principles for Effective Banking Supervision Standards Published by the BCBS

Elizalde, A. (2007), “From Basel-I to Basel-II: An Analysis of the Three Pillars”, *CEMFI Working Paper*, No. 0704.

Hillier, D (2003), “Treasury and Risk Management in the Emerging Markets”, Unpublished Book.

IIBF-Indian Institute of Banking and Finance (2006), “Theory and Practice of Treasury and Risk Management in Banks”, Mumbai.

IIBF-Indian Institute of Banking and Finance (2018), “Treasury Management”, Mumbai.

KPMG (2020), Financial risk management for banks: Responding to the challenges presented by COVID-19, April

Kumar, A., D.P. Chatterjee, C. Chandrasekhar, D.G. Patwardhan (2005), “Risk Management”, Indian Institute of Banking and Finance, Mcmillan, Mumbai.

Poole, B (2020), The critical role of bank treasuries in the COVID-19 crisis, CTM File

PwC (2020), How retail banks can keep the lights on during the COVID-19 crisis and recalibrate for the future?: https://www.pwc.com/us/en/library/covid-19

Appendix – 1

List of Banks Responded to the Questionnaire

Sl. No.	Bank Name
1.	Agrani Bank Limited
2.	Al Arafah Islami Bank Limited
3.	Bank Asia Limited
4.	BRAC Bank Limited
5.	Commercial Bank of Ceylon PLC
6.	Dhaka Bank Limited
7.	Dutch Bangla Bank Limited
8.	Eastern Bank Limited
9.	EXIM Bank Limited
10.	First Security Islami Bank Limited
11.	Islami Bank Bangladesh Limited
12.	IFIC Bank Limited
13.	Jamuna Bank Limited
14.	Meghna Bank Limited
15.	Mercantile Bank Limited
16.	Midland Bank Limited
17.	Mutual Trust Bank Limited
18.	NRB Commercial Bank Limited
19.	ONE Bank Limited
20.	Prime Bank Limited
21.	Premier Bank Limited
22.	Shahjalal Islami Bank Limited
23.	Sonali Bank Limited
24.	Southeast Bank Limited
25.	Standard Bank Limited
26.	The City Bank Limited
27.	Trust Bank Limited
28.	Union Bank Limited
29.	United Commercial Bank Limited
30.	Uttara Bank Limited

Appendix – 2

Bangladesh Institute of Bank Management (BIBM)

Mirpur-2, Dhaka

Questionnaire for the review workshop titled

"Treasury Operations of Banks"

Name:
Designation:
Bank:
Department / Division / Unit:
Cell: Email :

1. As a treasurer of your bank, please mention the risks faced by the bank in 2020 and 2021.

   (a) Internal Risks:

   (b) External Risks:

2. Please mention the major **highlights** of the **Money Market** in 2020 and 2021.

3. Please mention the major **challenges** you faced in the **Money Market** in 2020 and 2021.

4. Please mention the major **highlights** of the **Forex Market** in 2020 and 2021.

5. Please mention the major **challenges** you faced in the **Forex Market** in 2020 and 2021.

6. Please mention the major **highlights** of the **Fixed Income Securities** market in 2020 and 2021.

7. Please mention the **major challenges** you faced in the **Fixed Income Securities** market in 2020 and 2021.

8. Please mention the major **challenges** of **Liquidity Management** in 2020 and 2021.

9. What strategies/ policy measures would you recommend for overcoming the challenges of the overall treasury operations of banks in Bangladesh?

10. Please mention the **overall challenges** in the Money Market, Forex Market and Fixed Income Securities Market that you are facing in **Covid-19 situation**.

11. What the **possible solutions** to overcome the challenges of treasury operations due to **Covid-19 pandemic?**

Appendix – 3

List of participants in Focus Group Discussion (FGD)

Sl. No.	Name	Bank Name
1.	Arequl Arefeen	Bank Asia Limited
2.	Md. Asaduzzaman	Commercial Bank of Ceylon PLC
3.	Mehedi Zaman	Eastern Bank Limited
4.	Md. Eyahya	Islami Bank Bangladesh Limited
5.	Md. Mehedi Hasan	Jamuna Bank Limited
6.	Md. Sadiqur Rahman	Meghna Bank Limited
7.	Mr. Ashim Kimar Saha	Merchantile Bank Limited
8.	Md. Shamsul Islam	Mutual Trust Bank Limited
9.	Mirza Ashraf Ahmed	ONE Bank Limited
10.	Sk. Matiur Rahman	Prime Bank Limited
11.	Jahangir Javed	Shahjalal Islami Bank Limited
12.	Md. Rafiqul Islam	Sonali Bank Limited
13.	Md. Shah Alam	The City Bank Limited
14.	Md. Masud Shajahan	Trust Bank Limited
15.	Md. MonowarHossain	United Commercial Bank Limited

Appendix – 4

Questions asked in the Focus Group Discussion (FGD)

1. What are the major challenges of Liquidity Management of your bank?
2. What are the major challenges of Forex Risk Management of your bank?
3. What were the major challenges of the Fixed Income Securities market?
4. What are the challenges of the overall treasury activities of your bank?
5. What are the overall challenges of the treasury activities that you are facing in the Covid-19 situation?
6. What strategy/ policy support do you recommend for overcoming the challenges of the overall treasury operations of banks?

Appendix – 5

Summary of the Treasury related Circulars during Covid-19

Circular Reference	Broad Content
BRPD Circular No. 03 dated 24/02/2020	Rate of Interest/Profit on Lending / Investment must not exceed 9% (maximum cap). In case of a defaulted loan, a penalty of a maximum of 2% can be imposed.
FE Circular No. 13 dated 19/03/2020	Additional tenure up to 60 days may be allowed for the realization of export proceeds and submission of the Bill of Entry from a specified period of 4 months from the date of shipment for bona fide grounds.
	The usance period of the EDF Loan can be extended up to an additional 180 days making it up to a maximum of 360 days.
	AD can issue fresh Back to Back LC for 360 days under buyer's/supplier's credits within the admissible rate of interest for the usance period.
DMD Circular No. 01 dated 22/03/2020	BB announced to buy back government securities through the secondary trading window.
MPD Circular No. 01, March 23, 2020 Maintenance of CRR with BB	CRR reduced by 50 basis points from 5.5% to 5.0% bi-weekly and from 5.0% to 4.5% daily minimum to support the liquidity during the Covid-19 period.
MPD Circular No. 02, March 23, 2020 Re-fixation of Repo interest rate of Bangladesh Bank	The existing Repo interest rate of Bangladesh Bank has been reduced by 25basis points and re-fixed at 5.75percent from 6.00percent.
MPD Circular No. 03, April 09, 2020 Change of CRR	CRR was further reduced by 100 basis points from 5.0% to 4.0% bi-weekly and from 4.5% to 3.5% daily minimum.
MPD Circular No. 04, April 09, 2020 Re-fixation of Repo rate of BB	The existing Repo interest rate of Bangladesh Bank has been reduced by 50 basis points and re-fixed at 5.25 percent from 5.75 percent.
DOS Circular No. 02, April 12, 2020 Regarding ADR/IDR	Advance Deposit Ratio (ADR) for conventional banks has been increased to a maximum of 87% from 85% and Investment Deposit Ratio (IDR) for Islamic banking has been increased to 92% from existing 90%
FE Circular No.19 dated April 12, 2020 Refinancing Facility of EDF	AD may seek to refinance facilities from the Export Development Fund (EDF) for settlement of import payments against back to back LCs under supplier's /buyer's credit for a maximum of 180 days depending on the

Circular Reference	Broad Content
	actual situation for which extension of usance period/refinancing for extendable tenure is not available
DMD Circular No. 02, May 13, 2020 Term Repo (360 Days) facilities to mitigate the crisis due to novel coronavirus (COVID19)	Term repo (360 Days) facilities have been eased to mitigate the crisis caused by Covid-19. Scheduled banks and NBFIs is to be allowed to receive money depositing government securities in excess of the SLR limit; in these circumstances, the transaction will be considered as Collateralized Repo.
FE Circular No. 21, May 17, 2020 Enhancement of loan limit from EDF	The loan limit for refinancing from Export Development Fund (EDF) to ADs against their foreign currency financing for input procurement has been increased to $ 30 million.
BRPD Circular No. 12, June 10, 2020	Interest or Profit is to be transferred to a non-Interest-bearing blocked account from 01 April 2020 to 31 May 2020, Considering the business situation affected by the Covid-19.
DMD Circular No. 04, July 21, 2020 Formation of "Government Securities Investment Window" for providing cliental services of Treasury Bills and Bonds.	To provide prompt and effective cliental service to the potential investors in treasury bills and bonds, all the scheduled banks and financial institutions operating in Bangladesh are directed to form a "Government Securities Investment Window" under the control/supervision of their respective Treasury Division.
FEPD Circular No. 30 July 23, 2020 Relaxation of foreign exchange regulations for trade transactions - extended facilities	The policy supports export trade due to the COVID-19 pandemic are extended till March 31, 2021. The tenure of realization of export proceeds is also enhanced up to 90 days, as additional time from the statutory period of 4(four) months. The facilities for the extended period shall be applicable only for exports of readymade garments and textile goods.
SMESPD Circular No. 03 July 27, 2020 Introduction of Credit Guarantee Scheme (CGS) for Cottage, Micro and Small Enterprises	BB launched a Credit Guarantee Scheme for Cottage, Micro and Small Enterprises (CMSE) to salvage the adversely COVID-19 -pandemic-hit CMSE sector. The CGS shall give coverage to the scheduled banks and financial institutions against their collateral-free loans and investment in the CMSE sector. The scheme shall be provided through the CGS Unit under SME and Special Program Department of Bangladesh Bank. The said scheme is applicable only for the working capital loans and investment in the CMSE

Circular Reference	Broad Content
	sector under a BDT 200 billion stimulus package.
MPD Circular No. 05, July 29, 2020 Re-fixation of Repo and Reverse Repo interest rates of BB.	The existing Repo interest rate of Bangladesh Bank has been further reduced by 50 basis points and re-fixed at 4.75 percent from 5.25 percent. The Reverse Repo rate has been reduced by 75 basis points and fixed at 4.0 percent.
MPD Circular No. 06, July 29, 2020 Re-fixation of Bank Rate.	The existing bank rate has been reduced by 100 basis points and re-fixed at 4.0 percent from the existing 5.0 percent.
FEPD Circular No. 47 October 28, 2020 The interest rate on borrowing from Export Development Fund (EDF).	The interest rate on EDF loans has been reduced at 1.75 percent pa, chargeable to eligible borrowers; for disbursements until March 31, 2021. In accordance with the decision, ADs shall make interest payments to Bangladesh Bank at 0.75 percent pa; the remainder 1.00 percent pa as before will be retained by ADs as their interest income.
FE Circular No. 03 January 14, 2021 Advance payments against imports under buyer‟s credit.	Advance payments against permissible imports have been allowed to be executed directly by external financiers and/or offshore banking operations of scheduled banks, subject to repayment guarantees irrespective of amount acceptable to ADs received from banks abroad and compliance with other relevant instructions including reporting routine on IMP formalities, inter alia, to Bangladesh Bank. In this context, ADs shall observe extended due diligence concerning the transactions including KYC and AML/CFT standards. ADs shall also satisfy themselves regarding the enforceability of repayment guarantees.
BRPD Circular No. 17, August 08, 2021 Rationalization of Rate of Interest/ Profit on Deposit	The rate of Interest/Profit on FDR of an individual client must not be less than the rate of inflation.

Source: *Bangladesh Bank*

As a values based bank, BRAC Bank chooses to invest in education and training that fuels strong, sustainable and balanced economic growth. Such is the nature of the partnership between the bank and Bangladesh Institute of Bank Management that will enable people to understand and engage in finance, as part of their mandate. BRAC Bank supports the expansion of financing opportunities for all, and going forward, we intend to scale up the development opportunities of knowledge and excellence in order to broaden the capabilities and economic prospects.

It gives us great pleasure for a fifth successive year to be a part of this publication that is passionate about driving the skills development agenda. It is a well thought out initiative undertaken by Bangladesh Institute of Bank Management (BIBM) to provide access to an extensive pool of knowledge on the key functional areas of the banking of Bangladesh: Credit Operation; Trade Services Operation; Internal Control and Compliance; Islamic Banking Operation; Information Technology Operation; Treasury Operations; Human Resource Management; Sustainable Banking Activities; and Regulatory Reporting Requirements in Banks.

I am confident this document will bring a dramatic improvement in the management and operational quality of the banking industry.

Selim R. F. Hussain
Managing Director & CEO
BRAC Bank Limited

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Bangladesh Institute of Bank Management

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