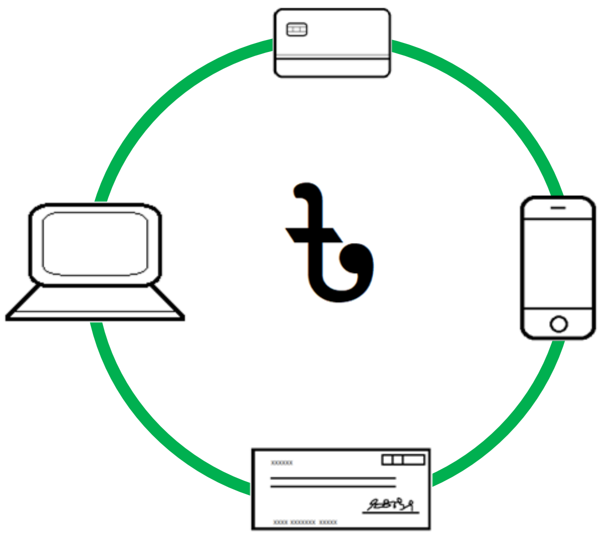
Payment Systems Report



Payment Systems Department
Bangladesh Bank

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Payment Systems Report

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Bangladesh Bank

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Contents

List of Charts

List of Appendices

Acronyms

ATM	Automated Teller Machine
BACH	Bangladesh Automated Clearing House
BACPS	Bangladesh Automated Cheque Processing System
BB	Bangladesh Bank
BD-RTGS	Bangladesh Real Time Gross Settlement System
BDT	Bangldesh Taka
BEFTN	Bangladesh Electronic Fund Transfer Network
CIT	Cheque Imaging and Truncation
DFS	Digital Financial Service
FI	Financial Institution
FinTech	Financial Technology
FY	Financial Year
GDP	Gross Domestic Product
GoB	Government of Bangladesh
HV	High-Value
IBFT	Internet Banking Fund Transfer
MFS	Mobile Financial Services
NPSB	National Payment Switch Bangladesh
POS	Point of Sales
PSD	Payment Systems Department
PSO	Payment System Operator
PSP	Payment Service Provider
RFFO	Regulatory Fintech Facilitation Office
RV	Regular-Value
VAT	Value Added Tax

Executive Summary

An efficient payment system plays a vital role in monetary transmission in the country’s economy. Indeed, a robust payment and settlement system ensures a smooth flow of money and contributes to financial stability and economic growth. Therefore, the infrastructure of modern payment systems in Bangladesh is developed such that it is capable of delivering services in rural and remote areas which may facilitate economic development and financial inclusion. Bangladesh Bank (BB) as the central bank is entrusted to promote, regulate and ensure a secure and efficient payment system in the country under the capacity of 7A(e) of The Bangladesh Bank Order, 1972. In this continuum, Payment Systems Department aspires in promoting new payment, clearing, and settlement systems to ease financial transactions reducing the paper money transaction to lead the country toward a less-cash economy.

Against this backdrop, this report delivers the developments in the payment systems of Bangladesh, especially for the period of July to December 2021. In particular, this report outlines the transaction patterns of paper-based money and the transaction trends of different electronic and cheque-based payment systems related to both the retail and large-value payments in quarterly basis. In this course, time-series data has been collected here for each of the dominant retail and large-value payment systems individually together with the paper-based currency in circulation. All the data are analyzed with previous trends along with comparing their performance across the payment systems.

Currency in circulation: currency notes and coins in circulation amounted around BDT 2279 billion, at the end of Q4 2021, of which Taka 176 billion was held by banks and the rest was held by the public. As a percentage of GDP and Money Supply, currency in circulation stood at 6.43 and 0.15, which was 0.13 percentage point and 0.06 percentage point less than that of the previous year respectively.

Digital Payment Systems: In terms of value, transactions through RTGS and BACPS hold major share of the payment systems which show dominance of paper-based instruments in the economy. On the other hand, in terms of volume, transactions by MFS, BEFTN, and NPSB are well ahead of BACPS and RTGS which indicates that people are getting habituated with the electronic mode of payment.

Bangladesh Automated Cheque Processing System: Although both the number and value of BACPS transaction show fluctuations in review periods, around 5595 thousand instruments were cleared valuing around BDT 6455 billion through BACPS in Q4 2021, which were 5 percent and 6 percent higher respectively compared to those of the Q4 2020.

Bangladesh Real Time Gross Settlement System: Under the discussion horizon, both the number of instruments processed and its associated values show increasing trends. During Q4 2021, BD-RTGS settled around 1473 thousand instruments amounting to around BDT 7978 billion which were consequently 69 percent and 88 percent higher compared to those of the Q4 2020.

Bangladesh Electronic Fund Transfer Network: Transactions through BEFTN also shows fluctuation during the periods in discussions. In Q4 2021, BEFTN settled 35933 thousand transfers valuing BDT 1421 billion on top of the expansion of Q4 2020 for 107 percent and 44 percent respectively.

National Payment Switch Bangladesh: Transactions through the three channels of NPSB demonstrate robust growths. In terms of volume, during Q4 2021, 9860 thousand, 1851 thousand, and 1901 thousand ATM, POS, and IBFT transactions were settled consequently, where ATM, POS, and IBFT transactions increased by 36 percent, 39 and 46 percent respectively compared to that of Q4 2020. At the same time, the value of ATM, POS, and IBFT transactions was increased to BDT 82 billion, BDT 7 billion, and BDT 68 billion correspondingly on top of the expansion of the value of Q4 2020 by 39 percent, 38 percent, and 218 percent respectively.

Mobile Financial Service: Both in terms of value and volume, transactions through MFS show steady growths over time. In Q4 2021, 999 million transfers valuing BDT 2067 billion were settled through MFS on top of the expansion of the Q4 2020 for 15 percent and 26 percent respectively. Number of MFS users also shows an increasing trend.

Overall, transactions in digital payment platforms/channel, especially through BEFTN, RTGS, NPSB, and MFS are growing in tandem with economic expansion; which have been reflected in the payment systems' key indicators. For ready-references of the different stakeholders, this report summarizes the regulatory framework (e.g., acts, guidelines, directives) of the payment and settlement systems, and the list of MFS providers, Payment Service Providers (PSPs), and Payment System Operators (PSOs).

1 Currency in Circulation

In conventional sense, money supply includes coins and notes in circulation (that are generally liability of the central bank and/or government) together with demand and time deposits in banks, which is commonly referred as M2 Therefore, currency (i.e., coins and notes) is one of the basic parts of money supply.

Being the apex monetary authority of Bangladesh, Bangladesh Bank is the sole agency to print, mint, and issue bank notes in the country. According to the 7A(e) and 16(22) of the Bangladesh Bank (BB) Order, 1972 the Bangladesh Bank is entrusted to conduct the business. Apart from bank notes, Bangladesh Bank issues Government notes and coins on behalf of the Government of Bangladesh (GoB).

Bangladesh Bank currently issues bank notes in seven denominations, such as ৳10, ৳20, ৳50, ৳100, ৳200, ৳500, and ৳1000. Besides, it issues Government notes and coins for ৳1, ৳2, and ৳5. At the end of the Q4 2021, with an increment of 12 percent than that of the Q4 2020, total amount of currency notes and coins in circulation amounted around Taka 2279 billion, of which Taka 176 billion was held by banks and the rest was held by the public. As on mid-year of 2021, Currency in circulation as a percentage of M2, and GDP stood at 0.15, and 6.43 respectively, which was 0.06 percentage point and 0.13 percentage point less than that of the previous year (Chart 1, and List 4).

Chart 2 shows that over the periods, issuance of notes for ৳ 500 is highest followed by ৳ 10, ৳ 100, ৳ 1000, ৳ 20, ৳ 50, and ৳ 200. By and large, the chart indicates that the demand for high denomination notes is increasing, while the demand for low denomination notes is broadly decreasing.

Chart 1: Currency in Circulation

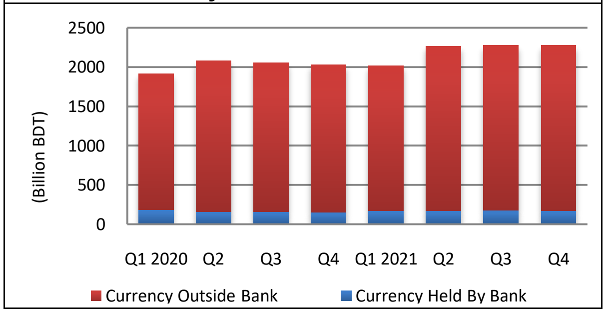


Chart 2: Number of Notes in Circulation

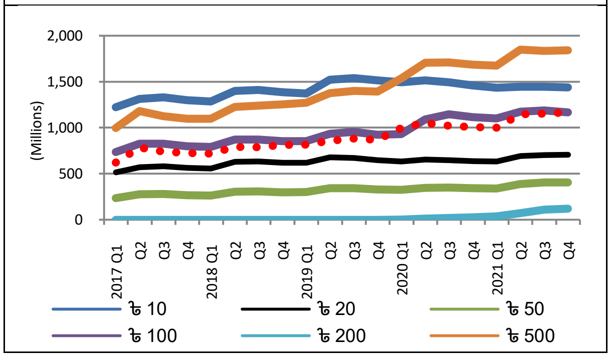


Chart 3: Share of Volume of Notes in Q4 2021

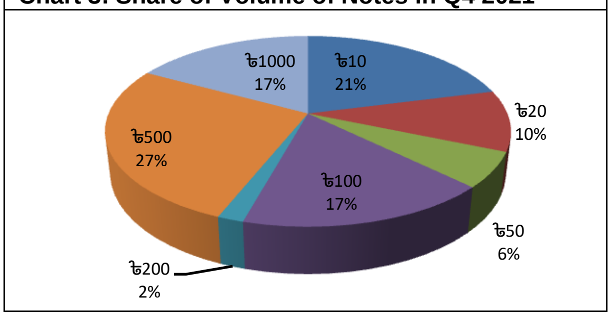
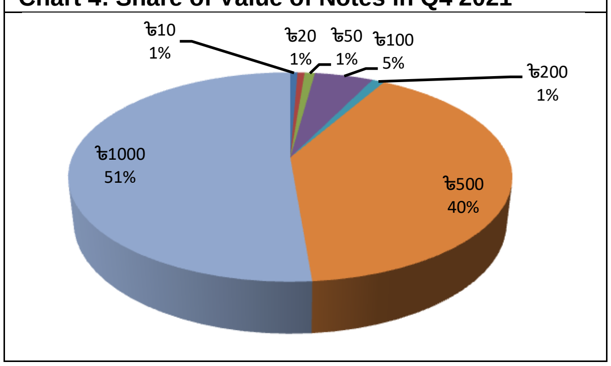


Chart 4: Share of Value of Notes in Q4 2021



2 Payment Systems in Bangladesh

Payment systems in Bangladesh are broadly categorized into large-value payments, and retail value payments.

Large value payments are settled through high-value cheque transactions at the Bangladesh Automated Cheque Processing System (BACPS), and high-value Real Time Gross Settlement System (BD-RTGS). On the other hand, retail-value payments are settled through regular-value BACPS, Bangladesh Electronic Fund Transfer Network (BEFTN), card and internet-based payments through National Payment Switch Bangladesh (NPSB), and Mobile Financial Service (MFS). In Q4 2021, in terms of value, and volume the aforesaid platforms settled BDT 18079 billion, and 999 million transactions respectively which are 39 percent and 15 percent higher compared to the same of Q4 2020 (Charts 5 and 6).

By and large, the payment platforms of the country are categorized into four platforms, such as BACPS, BEFTN, BD-RTGS, and NPSB. Besides, MFS plays a vital role as a digital payment channel in the economy.

Historically, in terms of value, cheque-based BACPS covers the largest share among the payment platforms/channel in Bangladesh. However, in recent times, BD-RTGS has been capturing the leading position in the payment processes followed by BACPS, MFS, BEFTN, and NPSB. On the other hand, in terms of volume, MFS captures the lion's share of the payments in the country followed by BEFTN, NPSB, BACPS, and BD-RTGS (Charts 7 and 8).

Chart 5: Digital Payment System (Value)

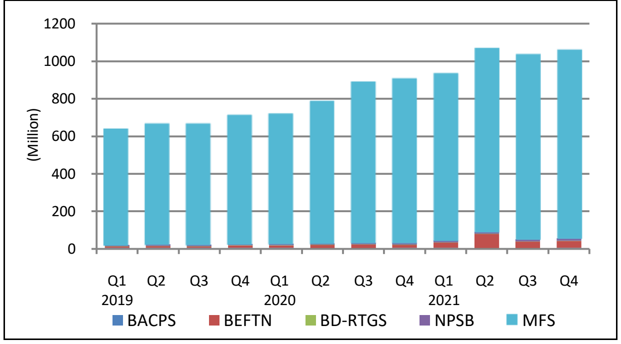


Chart 6: Digital Payment System (Volume)

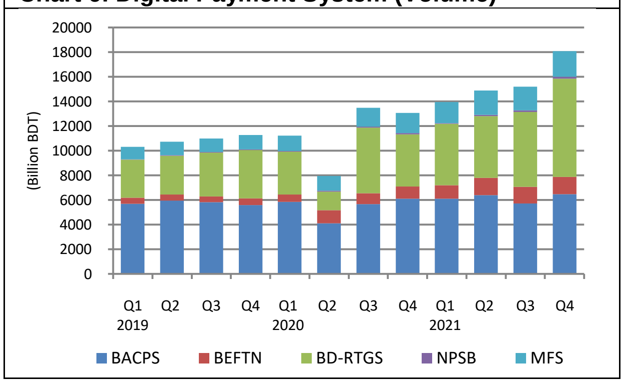


Chart 7: Shares of Digital Payment Platforms/Channel (Value)

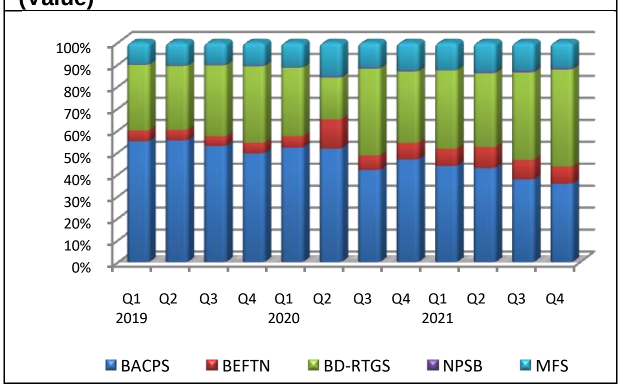
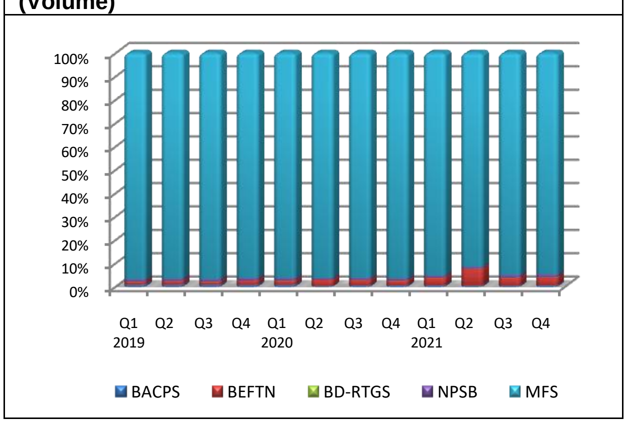


Chart 8: Shares of Digital Payment Platforms/Channel (Volume)



2.1 Bangladesh Automated Cheque Processing System (BACPS)

Using the Cheque Imaging and Truncation (CIT) technology for clearing the paper-based instruments (i.e., cheque, pay-order, dividend, refund warrants, etc.), BACPS brings countrywide several conventional physical clearing-houses into a single clearing and settlement platform. Two sessions are available daily in BACPS, namely High-Value (HV) session, and Regular-Value (RV) session. HV session accommodates cheques with minimum value of BDT 500 thousand and above, and settles in T+0 timeline for both the bank and customer. In parallel, RV session accommodates any valued cheques and settles in T+0 for banks and T+1 for customers.

During Q4 2021, through BACPS, around 4967 thousand RV instruments were cleared valuing around BDT 2284 billion which were 5 percent and 4 percent higher compared to those of the Q4 2020 respectively. On the other hand, around 627 thousand HV instruments valuing around BDT 4171 billion were cleared in the Q4 2021, on top of the expansion of the Q4 2020 for 7 percent in both the cases. Overall, around 5595 thousand instruments were cleared valuing around BDT 6455 billion through BACPS in Q4 2021, which were 5 percent and 6 percent higher respectively compared to those of the Q4 2020 (Chart 9 and 10). The larger growth in value compared to growth in volume indicates that per transaction value in BACPS has somewhat increased in Q4 2021. Nowadays, compare to GDP, transactions by BACPS shows a downward trend due to the introduction of various faster alternative payment platforms.

Chart 9: BACPS Transactions (Volume)

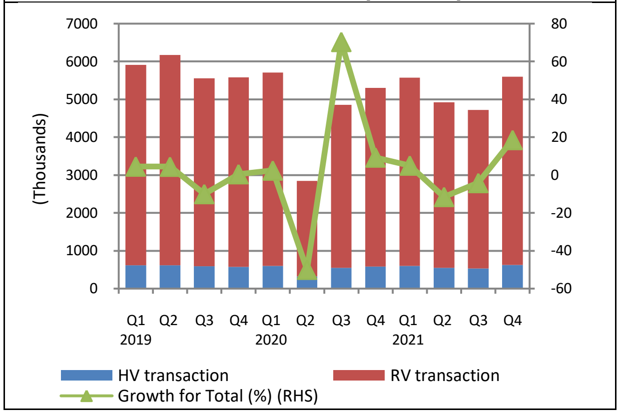


Chart 10: BACPS Transactions (Value)

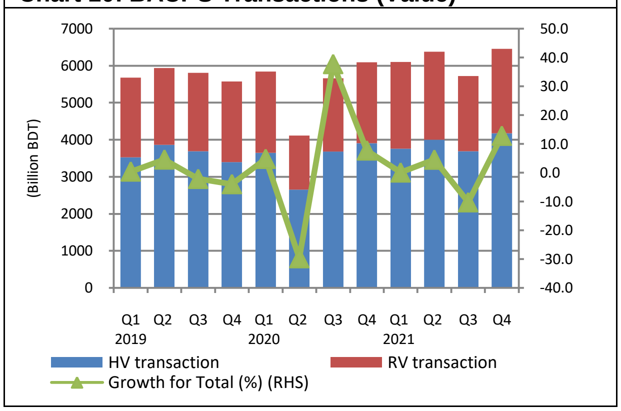


Chart 11: BD-RTGS Transactions (Volume)

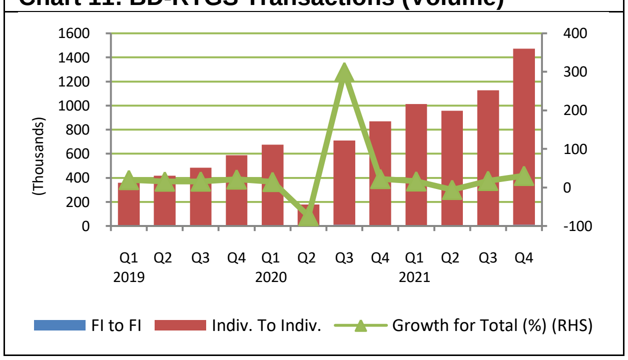
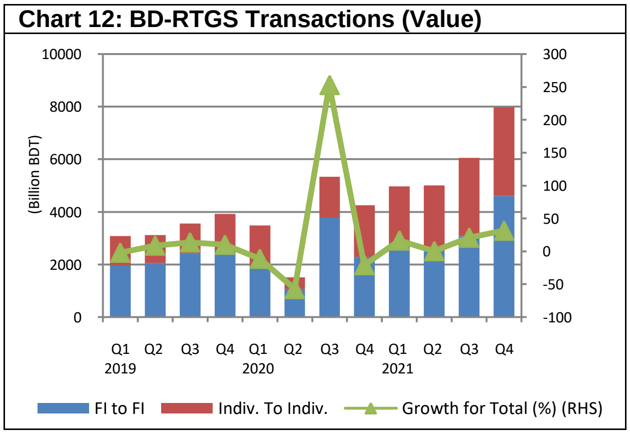


Chart 12: BD-RTGS Transactions (Value)



2.2 Bangladesh Real Time Gross Settlement System (BD-RTGS)

Delivering instant settlement facilities to large-value and time-critical payments, in terms of value, BD-RTGS become the largest digital payment platform for the payment ecosystem of the country. The system is designed to settle high value (BDT 100 thousand or above) local currency transactions as well as domestic foreign currency transactions. As of December 2021, together with some agent banking branches, 10960 branches of 59 scheduled banks are now connected to this system.

During Q4 2021, BD-RTGS settled around 1473 thousand instruments amounting to around BDT 7978 billion which were consequently 69 percent and 88 percent higher compared to those of the Q4 2020 (Charts 11 and 12). Both financial institution (FI) to financial institution transactions and individual (Indiv.) to individual transactions in terms of value and volume are receiving growing popularity in BD-RTGS. Especially, various Government transactions, such as VAT Online Payment, Customs Duty E-payment, Automated *Challan* payment, etc. became dependent on BD-RTGS. Therefore, both the volume and value of transactions in BD-RTGS are demonstrating sustained high growth. Previously, considering the value of transactions, BD-RTGS was mostly used as an interbank (wholesale) money market platform. However, the value of transactions between individual to individual is increasing at an increasing rate, which envisages that people are becoming more accustomed to real-time digital payment methods.

Chart 13: RTGS and BACH HV Transactions (Vol.)

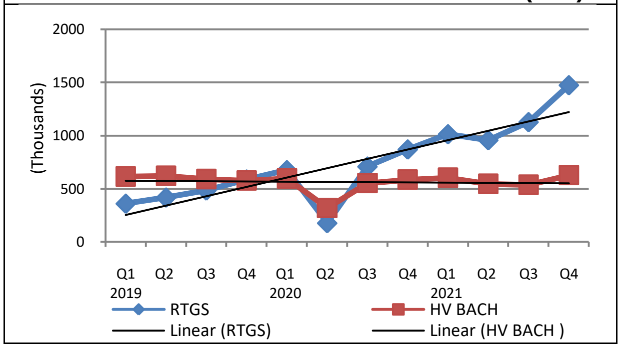
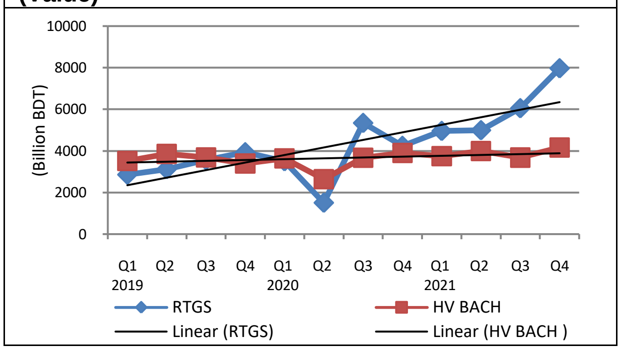


Chart 14: RTGS and BACH HV Transactions (Value)



2.2.1 Relative Performance of BD-RTGS and BACPS High-Value Cheque

BD-RTGS facilitates the transactions amounting to BDT 100 thousand and above, whereas HV transactions of BACPS settle BDT 500 thousand and above. In terms of the volume and value of transactions, RTGS shows upward trends, while HV-BACPS shows a downward trend in volume and a slightly upward trend in value as indicated by the linear trend lines fitted for RTGS and HV transactions in Charts 13, and 14. It implies that over time the number of items processed in the RTGS system is growing faster than the HV items processed in BACPS. Indeed, transactions in RTGS in Q4 2021 markedly surpassed the transactions in BACPS from Q4 2020, and the difference is widening gradually. The faster and efficient service offered by RTGS is gaining popularity in the market and gradually replacing the services offered by BACPS.

2.3 Bangladesh Electronic Fund Transfer Network (BEFTN)

Being a paperless, cost-effective, secured, and efficient payment method; BEFTN settles a wide range of credit transfers (e.g., salary payments, foreign and domestic remittances, social safety net payments, interest and principal payment of National Savings Certificates, company dividends, retirement benefits, etc.), and debit transfers (e.g., utility bill payments, loan repayments, insurance premiums, corporate to corporate payments, etc.).

In Q4 2021, BEFTN settled 35933 thousand transfers valuing BDT 1421 billion on top of the expansion of Q4 2020 for 107 percent and 44 percent respectively (Charts 15 and 16). Growth in the volume of transactions is mainly attributable to the usage of the system by the Government for the disbursement of the transfer payments to individuals. On the other hand, growth in the value of transactions is mainly owed to the payments of loan installments by the debtors. BEFTN becomes a popular platform to the individual-debtors at the onset of the movement restrictions stemmed from the COVID-19 pandemic.

2.4 National Payment Switch Bangladesh (NPSB)

Interbank electronic payments originating from different alternative delivery channels, such as Automated Teller Machines (ATM), Point of Sales (POS), internet-based Interbank Fund Transfer (IBFT), etc. are facilitated through NPSB. NPSB acts as a mother switch and connects all child switches owned or shared by banks or non-bank entities, and creates a

Chart 15: BEFTN Transactions (Volume)

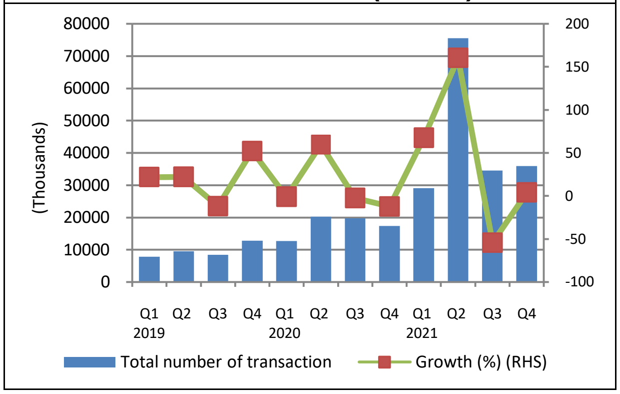


Chart 16: BEFTN Transactions (Value)

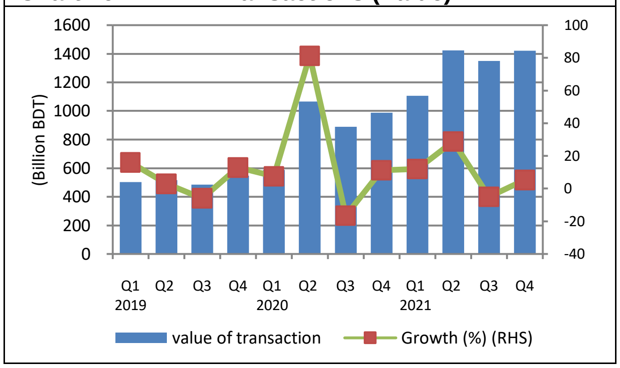


Chart 17: NPSB Transactions (Volume)

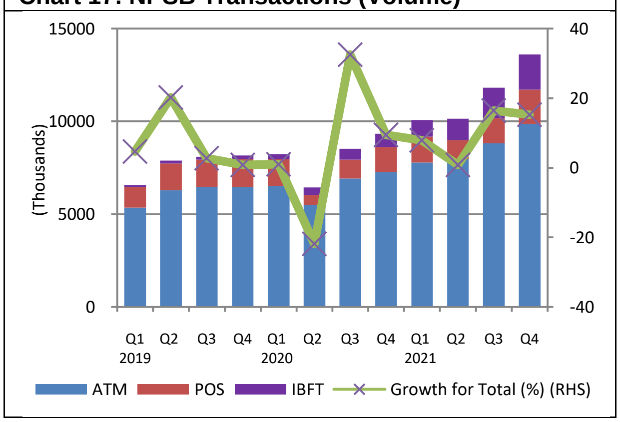
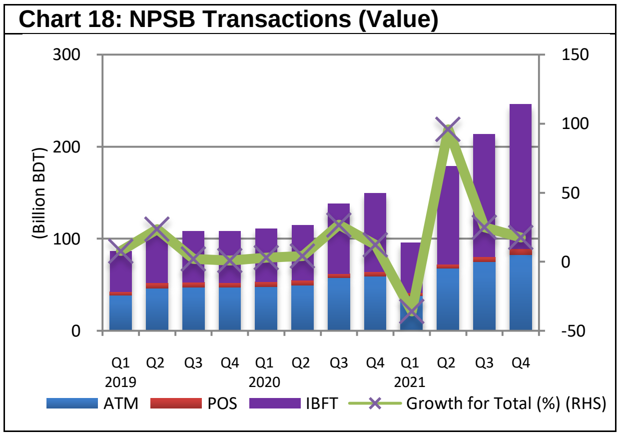


Chart 18: NPSB Transactions (Value)



Transactions through the three channels of NPSB demonstrate robust growth as shown in charts 17 and 18, which entail the nation's growing preferences toward electronic payment modes. In terms of volume, during Q4 2021, 9860 thousand, 1851 thousand, and 1901 thousand ATM, POS, and IBFT transactions were settled consequently, where ATM, POS, and IBFT transactions increased by 36 percent, 39 and 46 percent respectively compared to that of Q4 2020. At the same time, the value of ATM, POS, and IBFT transactions was increased to BDT 82 billion, BDT 7 billion, and BDT 68 billion correspondingly on top of the expansion of the value of Q4 2020 by 39 percent, 38 percent, and 218 percent respectively. Overall, interbank electronic transactions' volume and value through NPSB registered 13612 thousand, and BDT 157 billion respectively on top of the expansion of 46 percent, 84 percent for Q4 2020.

A closer look at the transaction profiles among the three channels finds that value proportion of IBFT transactions in growing faster than its volume proportion. It implies that value per transactions through IBFT is increasing rapidly. Growing popularity in the adoption of digital lifestyle by the middle-class population, especially payment of the credit installments helped increasing the transactions through IBFT.

2.5 Mobile Financial Service (MFS)

To bring financial services to the doorsteps of the unbanked and underserved population, BB introduced the bank-led model of MFS in 2011, allowing MFS providers to extend their services through their designated agents. The MFS

Chart 19: MFS Transactions (Volume)

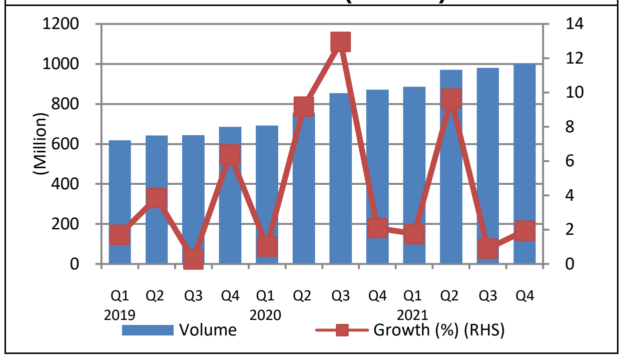


Chart 20: MFS Transactions (Value)

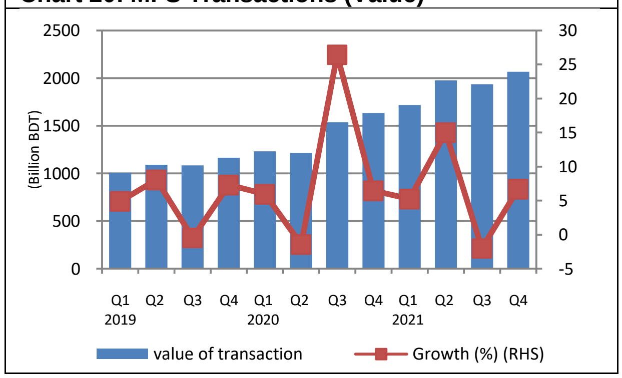


Chart 21: MFS Usage (Volume)

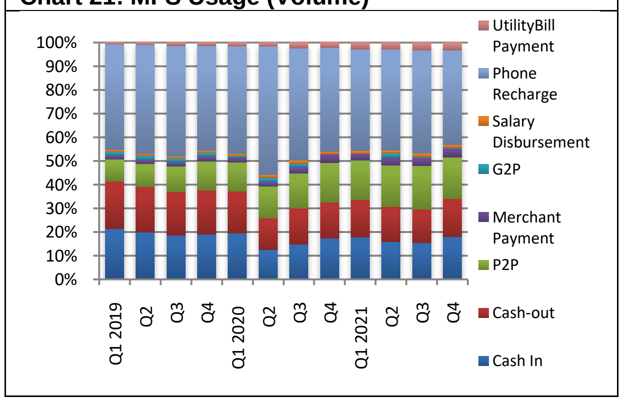
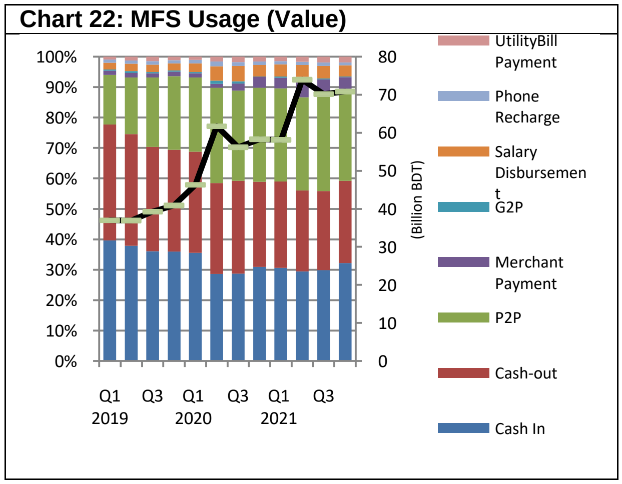


Chart 22: MFS Usage (Value)



sector is witnessing a steady expansion over the years. Currently, BB also allows financial institutes and government agency-led MFS models, inviting more providers

In Q4 2021, through MFS, 999 million transfers valuing BDT 2067 billion were settled on top of the expansion of the Q4 2020 for 15 percent and 26 percent respectively. The increase in volume and value of MFS transactions is owed mainly to the change of habit of the nation in adopting digital payments. The sustained growth of the availability and accessibility of MFS in a favorable leeway helped to increase the usage of the service. Moreover, to reach the end-user directly, now GoB prefers MFS to transfer various payments under the safety-net program. It is to recollect that GoB has provided soft-loans to the export-oriented industries in FY20 to pay the workers' salaries, amid the pandemic, which was distributed only through the workers' bank accounts or mobile wallets. Furthermore, amid the COVID-19 pandemic, GoB has provided cash assistance to five million marginal families through mobile wallets and four major MFS providers have been used as the distribution channel to reach the beneficiaries. All these issues surged the access and usage of MFS significantly.

Considering the value, during Q4 2021, MFS was mostly used for cash-in followed by P2P transfer, cash-out, merchant payment, salary distributions, and others. Particularly, around 32 percent, 29 percent, 27 percent, 5 percent, and 4 percent transactions were composed of cash-in, P2P transfer, cash-out, merchant payment, and salary distributions respectively. In Q4 2020,

Chart 23: Numbers of MFS Users

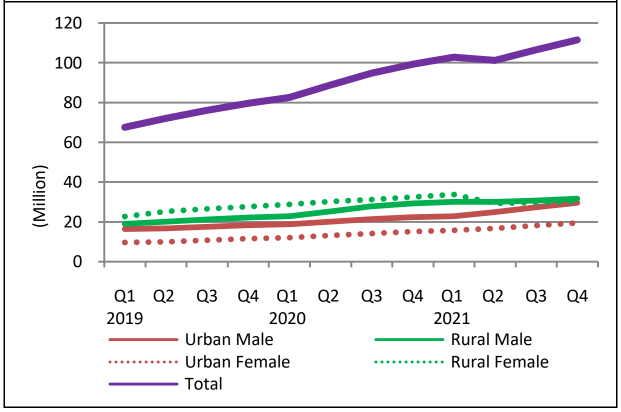
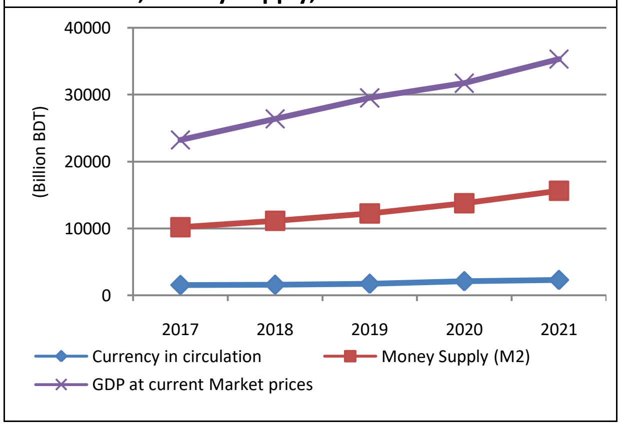


Chart 24: Relationship among Currency in Circulation, Money Supply, and GDP



those categories settled around 31 percent, 31 percent, 28 percent, 4 percent, 4 percent transactions respectively. In terms of volume, similar to Q4 2020, MFS was mostly used for phone recharge, followed by cash-in, person-to-person (P2P) transfer, cash-out, merchant payment, and others in Q4 2021. In particular, nearly 40 percent, 18 percent, 18 percent, 16 percent, and 4 percent of transactions were made for phone recharge, cash-in, P2P transfer, cash-out, and merchant payment respectively (Charts 21, and 22). Notably, during the recent years, in usage, share of cash-in shows an increasing trend, while cash-out shows a declining trend. Therefore, float of the MFS providers is increasing gradually. At the end of Q4 2021, float of the MFS providers registered

BDT 71 billion, compared to the same for BDT 58 billion at the end of Q4 2020 (Chart 22).

Number of MFS users also show an increasing trend as shown in chart 23. At the end of Q4 2021, the number of active MFS accountholders increased to 111 million from 99 million in Q4 2020. However, female MFS users in rural area dropped in Q4 2021 compared to the same for Q4 2020. Waning of accounts opened to receive the Government subsidies in COVID-19 period mainly owes to the drop in rural-female MFS accounts.

3 Alternative Delivery Channel and Licensing

To promote and ensure efficient, secured, and cashless payments in the country, Bangladesh Bank issues licenses to FinTech businesses in two major categories, such as Payment System Operator (PSO), and Payment Service Provider (PSP). Generally, PSPs deliver e-wallet services while PSOs provide merchant aggregation, merchant acquiring, white label ATM, payment gateway, and switching solution services.

During the review period (i.e., July – December 2021), in accordance with the Bangladesh Payment and Settlement Systems Regulations-2014, to deliver e-wallet service within the territory of Bangladesh, Payment Systems Department (PSD) delivered license to 'Progoti Systems Limited' on 17 November 2021. As on 31 December 2021, five PSOs and four PSPs were fully operational in the market of Bangladesh.

4 Regulatory Fintech Facilitation Office

Given the environment of radical changes, technological innovations, and complexities in economic activities around the globe, digital financial services are changing rapidly. Pertinently, digital financial innovation (i.e., Fintech) is playing a vital role to build digital financial infrastructure by creating new business models, and providing financial inclusion through variety of new financial services. To materialize the benefit, it is immensely important to make coordination between innovation, risk, and policy measures. It is mandatory to consider and analyze the granular aspects of these innovative ideas so that people can avail the highest benefit from these fast-approaching Fintechs within a proper regulatory framework.

In this course, Bangladesh Bank established Regulatory Fintech Facilitation Office (RFFO) to facilitate and promote diverse Fintech initiatives with ingenuity. This office analyzes the competencies and demands of the potential business models and innovations. In addition, it explores the suitability of different innovations and business models applying simulation and experiments in a controlled atmosphere. Apart from delivering regulatory assistance to the new entrants, RFFO aims to expand its endeavors to develop harmony among banks, financial institutions, and other regulatory organizations in the realm of Fintech upheaval.

During the period under review, RFFO initiated four new pilot projects, among which one project deals with the factoring /receivables financing, one project deals with the Eid-Ul-Azha based cattle market payment channel, and the rest deals with e-wallet and usage enhancement of personal retail accounts.

5 Payment Systems Oversight

To oversee and monitor the performance of Payment, Clearing, and Settlement Systems and its participants around the country, PSD has set up a separate ‘Payment System Oversight’ unit. It also supervises all other non-bank payment institutions, such as MFS, PSPs, and PSOs functioning in the country. This section remains vigilant to achieve the objectives of the safety and efficiency of payment systems by monitoring and assessing existing and planned payment systems and by inducing policy changes when deemed necessary. In this course, Payment Systems Oversight focuses on the following activities:

i. Collects onsite and off-site data from systems and participants regarding day-to-day operation; analyzes financial flow and transaction pattern, risk exposures, risk management procedures, and practices; monitors back-up and business continuity plan; mitigates disruptions and disputes; etc.
ii. Checks compliance of systems and participants with applicable rules and regulations identifies the gap and comes up with recommendations with time to time follow up.
iii. Analyzes the weakness of systems, participants, or schemes and identifies the areas that need improvements or intervention of BB.
iv. Facilitates 'Self-Assessment' of systems and participants based on regulatory requirements and International Standards.

During the review period, besides regular off-site vigilance activities, the Oversight unit conducted on-sight inspections in one PSO, one MFS provider, and central bank office. Moreover, upon request of the Commerce Ministry, two e-commerce platforms were investigated. In relation to these investigations, concerning payment gateways, and banks were also inspected.

6 Arbitration and Dispute Resolution

In tandem with the increasing number of transactions through various switches and channels, occasionally, disputes between banks emerge in the payment and settlement systems. The nature of arguments, however, is not that diverse. Technical and operational faults are the most common causes of disputes. To resolve such disputes, PSD provides banks and participants with dispute resolution and arbitration services. In the review period, PSD received one new dispute related to cheque, and resolved it. However, four aged disputes are still under the arbitration process.

Overall, transactions in payment platforms/channel, especially through BEFTN, RTGS, MFS, and NPSB are growing in tandem with economic expansion; which have been reflected in the payment systems’ key indicators (list 4). Compared to GDP, during 2021, value in BEFTN, RTGS, MFS, and NPSB surged by 47 percent, 47 percent, 31 percent, and 26 percent respectively compared to the same of the preceding year. Value in cheque transactions also showed a trivial improvement for 2 percent in 2021 compared to its previous year's score. However, as expected, value and usage of cheque transactions show downward trends over the years, due to the developments and growing popularity of other digital payment methods. Per capita transactions in different payment platforms/channel, in terms of value, also show similar growth trends. Per capita transactions (value) through BEFTN, RTGS, MFS, and NPSB in 2021 increased by 62 percent, 62 percent, 45 percent, and 47 percent respectively compared to the same of the preceding year. Per capita cheque transactions (value) increased relatively less by 12 percent in 2021 compared to the same of the previous year.

It is to mention that the economy has been undergoing through an extraordinary time due to the COVID-19 pandemic. In containment of shocks, diverse initiatives for monetary expansions were received at the onset of the pandemic in 2020. In this continuum, per capita currency in circulation expanded by 8 percent in 2021 compared to that of the 2020.

Increased availability of different modes of payment outlets (e.g., bank branches, agent banking outlets, ATM terminals, POS machines, MFS agent points, etc.) together with different options of digital payment methods are supporting the attainment of desired level of money supply with relatively less currency in circulation. Chart 24 shows that currency in circulation had a steady growth compared to the growths in GDP and Money Supply during the period of 2017 to 2021. It provides a notion that payment system of Bangladesh is becoming efficient gradually. Moreover, it provides an indication that payment system efficiency is positively associated with the money creation process, and velocity of money in Bangladesh. However, to draw a clear inference in relation to these, further investigation is required.

7 Transactions through Payment Systems/Platforms

Payment Systems/Instruments	2017	2018	2019	2020	2021
Large Value Payment Systems					
RTGS System					
Volume of transactions (‘000)	785	863	1848	2430	4569
Value of transactions (BDT bn.)	20064	6675	13675	14577	24004
Automated Clearing House (high value)					
Volume of transactions (‘000)	2222	2415	2401	2055	2312
Value of transactions (BDT bn.)	12969	14733	14480	13886	15623
Retail Value Payment Systems					
Automated Clearing House (regular value)					
Volume of transactions (‘000)	20951	20849	20823	16667	18500
Value of transactions (BDT bn.)	7462	8214	8520	7827	9031
Electronic Fund Transfer					
Volume of transactions (‘000)	18638	24804	38614	70059.7	175104.2
Value of transactions (BDT bn.)	1334	1723	2052	3531.3	5300.9
Credit Cards					
No. of cards in use	908507	1180414	1537202	1676816	1874362
Volume of transactions (‘000)	16221	20705	26061	24117	33958
Value of transactions (BDT bn.)	96	119	134	142	213
Outstanding Credit(BDT bn.)	38	45	55	59	69
Debit Cards					
No. of cards in use	11653879	14302966	18231093	21377291	25285859
Volume of transactions (‘000)	164914	195210	224337	222760	298758
Value of transactions (BDT bn.)	1231	1421	1668	1770	2592
ATM Terminals					
Volume of transactions (‘000)	157402	178266	205590	201492	266179
Value of transactions (BDT bn.)	1195	1385	1627	1720	2516
POS Terminals					
Volume of transactions (‘000)	22351	27521	31667	27036	38318
Value of transactions (BDT bn.)	144	165	177	145	192
Internet Banking					
Volume of transactions (‘000)	7279	9545	15228	24431	38873
Value of transactions (BDT bn.)	365	325	650	796	1579
Mobile Financial Services					
Volume of transactions (‘000)	1875640	2272746	2589782	3171756	3837564
Value of transactions (BDT bn.)	3147	3789	4343	5614	7702

8 Key Indicators

	Key Indicators*					
	Particulars	**2017**	**2018**	**2019**	**2020**	**2021**
1	Currency in circulation as a percentage of GDP	6.51	5.87	5.77	6.56	6.43
2	Currency in circulation as a percentage of M2	0.149	0.140	0.140	0.151	0.145
3	Per capita Currency in Circulation value (BDT)	9352	9468	10292	12429	13401
4	Currency (held by Public) as a percentage of GDP	5.92	5.34	5.23	6.06	5.94
5	Per capita RTGS transaction value (BDT)	90343	81888	81582	87333	141773
6	RTGS transactions value as a percentage of GDP	62.87	50.78	45.76	46.12	68.00
7	Per capita Cheque usage (b)	0.14	0.14	0.14	0.12	0.12
8	Per capita Cheque transaction value (BDT)	116877	132060	137012	127474	143139
9	Cheque transaction value as a percentage of GDP	81.34	81.89	76.85	67.32	68.65
10	Per capita Electronic Fund Transaction (EFT) value (BDT)	6930	9471	10407	16055	26023
11	EFT value as a percentage of GDP	4.82	5.87	5.84	8.48	12.48
12	Per capita National Payment Switch (NPSB) transactions value (BDT)	507	794	937	1375	1910
13	NPSB transaction value as a percentage of GDP	0.35	0.49	0.53	0.73	0.92
14	Per capita NPSB transaction value (BDT)	369	507	794	937	1375
15	Per capita Card Transaction volume	1.06	1.21	1.45	1.46	1.82
16	Per capita Card transaction value (BDT)	7853	8845	10357	10719	14455
17	Per capita Debit Card transaction value (BDT)	7170	7972	9348	9753	13143
18	Per capita Credit Card transaction value (BDT)	522	659	776	756	1090
19	Per capita Internet banking transaction value (BDT)	2210	2007	2876	4274	5967
20	Per capita Mobile banking transaction value (BDT)	17130	21283	24235	28014	40553
21	Per capita Mobile banking transaction (Volume)	10	12	15	17	21
22	MFS transactions value as a percentage of GDP	0.12	0.13	0.14	0.15	0.19
23	Number of Bank Branches per 1,000 inhabitants	0.06	0.06	0.06	0.06	0.06
24	Number of Agent Banking Outlets per 1,000 inhabitants	0.02	0.02	0.03	0.05	0.08
25	Number of ATM terminals per 1,000 inhabitants	0.06	0.06	0.06	0.07	0.07
26	Number of POS terminals per 1,000 inhabitants	0.22	0.25	0.32	0.39	0.48
27	Mid-Year Currency in circulation (Bill. BDT)	1513	1549	1704	2081	2269
28	Total Domestic Credit (Bill. BDT)	8842	10132	11387	12943	14279
29	Reserve Money (Bill. BDT)	2247	2337	2462	2845	3481
30	Mid-Year Money Supply (M2) (BDT billion)	10161	11100	12196	13737	15609
31	GDP at current Market prices (BDT billion) (a)	23243	26392	29514	31705	35302
32	Mid-Year Population ('000) (a)	161750	163650	165550	167430	169310

a) source: Bangladesh Bureau of Statistics
(b) Total cheques cleared through BACH
* Key Indicators are estimated based on Financial Year (July to June) data.

9 Regulatory Frameworks

	Acts	Date
1	Bangladesh Bank Order, 1972	31/10/1972
2	Payment and Settlement Systems Act	Proposed

	Regulations/Guidelines	
1	Guidelines on Mobile Financial Services for the banks	1/9/2013
2	Guidelines on Agent Banking for the banks	9/12/2013
3	Bangladesh Payment and Settlement Systems Regulations (BPSSR), 2014	15/5/2014
4	Regulations on Electronic Fund Transfer Network 2014	15/5/2014
5	Guidelines on Mobile Financial Services for the Banks	27/11/14
6	Bangladesh Mobile Financial Services (MFS) Regulations, 2018	30/7/2018
7	Guidelines for Using National Payment Switch Bangladesh (NPSB) Logo	11/3/2019
8	Guidelines for White Label ATM and Merchant Acquiring Services	31/5/2020
9	Guidelines for 'Bangla QR' Code Based Payments	6/1/2021

	Major Directives/Circulars	
1	Implementation of National Payment Switch Bangladesh (NPSB)	24/12/2012
3	Risk mitigation measures related to "card not present" transactions	2/9/2013
4	Security and Risk Mitigation measures at ATM/POS transactions	5/9/2013
5	Receipt and processing of "Positive Pay Instruction" during cheque clearing through BACH	28/11/2013
7	Service charge of interbank ATM transaction made through NPSB	18/3/2014
9	Bangladesh Electronic Funds Transfer Network Operating Rules	10/7/2014
11	Service charge of interbank ATM transactions made through NPSB	20/1/2015
12	Displaying inter banks ATM transaction charges on visible places in ATM booths	16/2/2015
13	Reporting of Payment Systems related information through Rationalized Input Template	12/4/2015
14	NPSB Switch Operating Rules & User Manual: Disputes Management Rules	14/5/2015
15	Synchronization of all information incorporated in mobile SIM and KYC of MFS account for reducing the risk of criminal activities	2/8/2015
16	Bangladesh Real Time Gross Settlement (BD-RTGS) System Rules	9/9/2015
17	Ensuring appropriate Cyber Security Protection for financial sector	3/3/2016
18	Bank's responsibilities to ensure security and risk mitigation measures in card-based transactions	8/3/2016
19	Combined Circular for ensuring security, minimizing transaction risks and enhancing public awareness in card-based payments through different payment channels to reduce cash transactions	24/8/2017
20	Providing permission for card-based payments through contactless payment service using NFC technology and ensuring security, minimizing transaction risks & enhancing public awareness.	12/7/2018
23	Bangladesh Automated Cheque Processing System Operating Rules and Procedures	5/12/2019
24	Restraining from giving banking services to unauthorized institutions that provides payment services as PSP/PSO	5/3/2020
25	Continuation of Uninterrupted Banking and Payment Services in Response to COVID-19	19/3/2020
26	Opening MFS Account in the name of workers of export oriented industries.	6/4/2020
27	Disbursement of Cash assistance for 50 Lac distressed families through MFS	13/5/2020

	Major Directives/Circulars	
28	Launching Interoperable transactions among banks and MFS providers through National Payment Switch Bangladesh (NPSB)	22/10/2020
29	Bangladesh Electronic Funds Transfer Network (BEFTN) Operating Rules	28/10/2020
30	Instructions for Opening of Personal Retail Account	16/11/2020
31	Instructions regarding distribution of cash received from the value declared products/parcels of the licensed Courier Services through banking channel	6/5/2021
32	Guidelines for trust fund management in payment and settlement services	6/5/2021
33	Fund release policy for digital commerce enterprises	30/6/2021
34	Prohibition of receiving customers' money directly to the digital commerce enterprises' bank account	29/8/2021
35	Determination of Fees/Charges for domestic transactions routed through NPSB and Card schemes	18/10/2021

10 List of MFS, PSP, and PSOs

	Mobile Financial Service (MFS)	Licensing Date
1	Rocket (Subsidiary of Dutch-Bangla Bank Ltd.)	28/4/2010
2	Bkash (Subsidiary of BRAC Bank Ltd.)	12/4/2010
3	MYCash (Subsidiary of Mercantile Bank Limited)	7/1/2010
4	Islami Bank mCash (Subsidiary of Islami Bank Bangladesh Limited)	14/6/2012
5	Trust Axiata Digital Limited (TAP-Subsidiary of Trust Bank Ltd.)	28/12/2020
6	First Pay SureCash (Subsidiary of First Security Islami Bank Limited)	22/11/2011
7	OK Banking (Subsidiary of One Bank Limited)	8/5/2012
8	UCB Fintech Co. Ltd. (UPAY-Subsidiary of United Commercial Bank Ltd.)	28/12/2020
9	Rupali Bank SureCash (Subsidiary of Rupali Bank Limited)	2/2/2016
10	TeleCash (Subsidiary of Southeast Bank Limited)	28/10/2013
11	Islamic Wallet (Subsidiary of Al Arafah Islami Bank Limited)	3/12/2012
12	Meghna Bank Tap n Pay (Subsidiary ofMeghna Bank Limited)	18/8/2013
13	NAGAD (Bangladesh Post Office)-Interim Permission	15/3/2020

	Payment Service Provider (PSP)	
1	i-Pay Systems Limited	12/9/2017
2	D money Bangladesh Limited	20/1/2019
3	Recursion Fin Tech Limited (CashBaba)	24/3/2020
4	Green & Red Technologies Limited (JossPay)	16/3/2021
5	Progoti Systems Limited (TalliPay)	17/11/2021

	Payment System Operator (PSO)	
1	IT Consultants Limited	9/9/2014
2	Software Shop Limited	24/1/2016
3	Shurjomukhi Limited(ShurjoPay)	24/1/2016
4	Portonics Limited (PortPos)	12/1/2021

Appendices

Appendix 1

Currency in Circulation (in Billion BDT)		
	Held By Bank	Outside Bank
2020 Q1	186	1733
Q2	160	1921
Q3	164	1892
Q4	156	1875
2021 Q1	177	1842
Q2	174	2095
Q3	181	2096
Q4	176	2103

Source: Monthly Economic Trends, Statistics Department, BB

Appendix 2

Notes in Circulation by Denomination at the end of Quarter (in pieces)

	৳10	৳20	৳50	৳100	৳200	৳500	৳1000
2017 Q1	1,222,451,662	517,269,457	234,823,824	736,124,776	0	996,999,769	623,093,654
Q2	1,313,099,525	572,851,450	276,133,389	825,549,867	0	1,181,543,080	785,565,853
Q3	1,331,237,500	583,825,156	279,227,820	827,042,666	0	1,126,210,174	741,132,276
Q4	1,297,912,937	565,159,120	267,694,199	797,294,039	0	1,096,587,397	725,859,636
2018 Q1	1,283,244,799	559,530,423	262,972,136	793,035,503	0	1,099,207,553	720,425,820
Q2	1,400,816,267	630,715,155	304,702,137	870,679,244	0	1,225,844,330	792,284,237
Q3	1,408,684,629	636,328,349	307,634,035	872,611,701	0	1,240,341,706	790,345,820
Q4	1,385,226,778	622,847,722	299,596,154	854,816,603	0	1,253,684,879	814,731,267
2019 Q1	1,370,881,392	622,269,000	300,023,740	854,040,907	0	1,270,569,786	817,875,674
Q2	1,519,324,189	681,175,393	342,452,637	935,037,115	0	1,376,526,863	860,897,379
Q3	1,537,907,708	673,520,369	342,111,070	953,752,379	0	1,400,745,410	882,453,020
Q4	1,513,993,101	650,024,970	328,816,524	923,436,051	0	1,393,527,408	870,298,760
2020 Q1	1,492,320,459	634,529,626	326,536,473	929,802,848	2,502,864	1,534,201,674	999,150,496
Q2	1,515,370,139	655,921,886	345,700,971	1,090,036,260	12,302,706	1,704,721,361	1,056,146,215
Q3	1,493,764,984	650,492,875	349,497,443	1,145,567,604	20,253,528	1,709,181,310	1,021,727,562
Q4	1,457,932,089	638,471,025	341,769,771	1,115,999,941	29,202,845	1,685,233,313	1,010,804,152
2021 Q1	1,434,271,704	636,387,756	339,959,329	1,102,916,675	38,289,539	1,675,623,918	1,003,425,892
Q2	1,445,777,930	693,301,663	388,103,451	1,175,984,143	74,162,061	1,847,609,683	1,149,286,013
Q3	1,443,298,228	706,687,364	406,410,801	1,188,522,688	109,555,976	1,832,763,990	1,154,869,240
Q4	1,438,193,020	708,663,211	406,339,079	1,166,653,293	121,247,753	1,839,718,898	1,169,196,603

Source: Department of Currency Management, BB

Appendix 3

Transactions in Digital Payment Systems										
	Volume					**Value** (in Billion BDT)				
	BACPS	**BEFTN**	**RTGS**	**NPSB**	**MFS**	**BACPS**	**BEFTN**	**RTGS**	**NPSB**	**MFS**
2019 Q1	5914574	7829251	360039	6554763	618462422	5677	502	3082	44.4	1008
Q2	6175840	9558854	417155	7880748	642256571	5936	516	3119	54.8	1089
Q3	5553955	8420049	483860	8098639	643995661	5809	486	3553	55.8	1084
Q4	5579378	12806039	587025	8161449	685092832	5578	548	3921	56.2	1163
2020 Q1	5712191	12688998	675094	8239710	692058111	5846	589	3488	57.9	1232
Q2	2848477	20262648	177201	6436266	755443384	4110	1066	1509	60.2	1215
Q3	4855248	19767866	708516	8528020	853148381	5660	889	5331	76.2	1535
Q4	5305934	17340216	869446	9330010	870994923	6097	988	4249	85.5	1634
2021 Q1	5572352	29042077	1012651	10066750	886167004	6101	1106	4966	54.6	1720
Q2	4926488	75567943	956436	10144567	971500992	6377	1423	5001	106.9	1977
Q3	4718839	34561037	1126503	11811167	980205964	5722	1351	6058	133.6	1938
Q4	5594642	35933097	1473339	13611635	999179193	6455	1421	7978	157.0	2067

Appendix 4

Transactions through BACPS				
	Volume		Value (in Billion BDT)	
	HV trans.	RV trans.	HV trans.	RV trans.
2019 Q1	614177	5300397	3524	2153
Q2	620178	5555662	3865	2071
Q3	590045	4963910	3692	2117
Q4	576455	5002923	3399	2179
2020 Q1	596022	5116169	3648	2198
Q2	320058	2528419	2652	1458
Q3	552721	4302527	3678	1982
Q4	585766	4720168	3907	2189
2021 Q1	602543	4969809	3761	2340
Q2	545752	4380736	4002	2375
Q3	536043	4182796	3690	2032
Q4	627494	4967148	4171	2284

Appendix 5

Transactions through BD-RTGS						
	Volume			Value (in Billion BDT)		
	FI to FI	Indiv. to Indiv.	Total	FI to FI	Indiv. to Indiv.	Total
2019 Q1	7363	352676	360039	1955	1127	3082
Q2	7508	409647	417155	2063	1056	3119
Q3	6644	477216	483860	2406	1147	3553
Q4	8098	578927	587025	2550	1370	3921
2020 Q1	7311	667783	675094	1971	1517	3488
Q2	2660	174541	177201	1072	437	1509
Q3	10103	698413	708516	3774	1558	5331
Q4	6539	862907	869446	2291	1958	4249
2021 Q1	6824	1005827	1012651	2727	2239	4966
Q2	6299	950137	956436	2499	2502	5001
Q3	6716	1119787	1126503	3087	2972	6058
Q4	11391	1461948	1473339	4599	3380	7978

Appendix 6

Transactions through BEFTN		
	Volume	**Value** (in Billion BDT)
2019 Q1	7829251	502
Q2	9558854	516
Q3	8420049	486
Q4	12806039	548
2020 Q1	12688998	589
Q2	20262648	1066
Q3	19767866	889
Q4	17340216	988
2021 Q1	29042077	1106
Q2	75567943	1423
Q3	34561037	1351
Q4	35933097	1421

Appendix 7

Transactions through NPSB

(Value in Bill. BDT)

	ATM		POS		IBFT		NPSB overall	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
2019 Q1	5360967	38.41	1098634	3.90	95162	2.05	6554763	44.36
Q2	6290549	46.22	1450275	5.53	139924	3.04	7880748	54.79
Q3	6473779	47.25	1464208	5.16	160652	3.43	8098639	55.85
Q4	6453040	47.04	1513674	5.15	194735	4.06	8161449	56.25
2020 Q1	6511294	47.82	1444528	5.37	283888	4.67	8239710	57.85
Q2	5487209	49.33	544768	5.47	404289	5.41	6436266	60.21
Q3	6931462	57.68	1012276	4.05	584282	14.51	8528020	76.25
Q4	7273871	59.26	1335700	4.89	720439	21.38	9330010	85.53
2021 Q1	7783095	37.76	1398903	3.19	884752	13.67	10066750	54.62
Q2	7955235	67.86	1042136	3.90	1147196	35.18	10144567	106.94
Q3	8822319	75.00	1355833	4.98	1633015	53.64	11811167	133.61
Q4	9859862	82.23	1851171	6.73	1900602	68.04	13611635	157.00

Appendix 8

Volume of MFS Transactions								
								(in Millions)
	Cash In	Cash-out	P2P	Merchant Payment	G2P	Salary Disbu'nt	Phone Recharge	Utility Bill Pay
2019 Q1	131.39	124.99	56.22	10.27	9.90	4.54	275.69	4.63
Q2	127.81	122.61	62.00	11.64	11.10	5.34	294.31	6.66
Q3	120.47	117.27	69.50	10.98	10.67	5.10	300.64	8.69
Q4	130.93	126.68	83.03	14.41	10.74	6.04	303.05	9.11
2020 Q1	134.47	121.66	85.65	14.43	3.74	6.06	312.99	11.52
Q2	93.43	99.88	102.71	12.53	14.12	9.60	406.82	12.61
Q3	126.02	128.85	124.45	22.61	13.07	11.91	400.25	21.59
Q4	149.31	132.36	144.71	30.56	0.41	9.40	378.61	20.04
2021 Q1	155.77	139.39	146.29	24.65	1.26	10.16	377.81	24.50
Q2	153.57	142.03	168.13	31.44	17.73	12.13	410.18	28.34
Q3	148.76	137.12	177.70	31.69	4.54	13.20	419.95	32.17
Q4	178.00	158.02	174.69	35.59	4.29	11.24	395.64	32.43

Appendix 9

Value of MFS Transactions									
									(in Bill. BDT)
	Cash In	Cash-out	P2P	Merchant Payment	G2P	Salary Disbu'nt	Phone Recharge	Utility Bill Pay	Float
2019 Q1	397.85	382.62	163.20	14.54	3.93	22.37	10.70	9.09	37.00
Q2	411.01	397.98	201.36	16.69	6.48	25.82	12.37	13.12	36.94
Q3	388.54	370.76	246.15	14.35	4.26	26.34	12.64	15.69	39.28
Q4	415.96	386.51	279.39	16.53	4.62	27.35	12.72	12.78	40.93
2020 Q1	433.52	406.28	297.39	16.85	5.51	34.18	13.65	13.46	46.33
Q2	339.89	355.29	371.90	15.14	12.21	56.60	19.01	18.63	61.75
Q3	432.46	460.11	446.15	34.90	11.06	76.05	18.85	27.25	56.25
Q4	495.76	449.28	496.57	57.73	1.41	60.35	17.94	25.52	58.34
2021 Q1	515.93	477.83	516.59	57.55	8.19	66.00	18.22	25.09	58.14
Q2	567.68	513.37	592.13	97.02	32.68	74.34	20.22	33.13	74.00
Q3	563.82	488.17	597.74	94.99	5.74	77.65	20.73	36.48	70.20
Q4	647.12	544.98	591.44	94.71	4.75	73.63	19.47	37.71	70.87

Appendix 10

Number of MFS Accounts					
					(in Millions)
	Urban Male	Rural Male	Urban Female	Rural Female	Total
2019 Q1	16.31	18.89	9.65	22.68	67.54
Q2	16.67	20.10	10.01	25.27	72.05
Q3	17.46	21.18	10.79	26.54	76.01
Q4	18.19	22.13	11.53	27.65	79.65
2020 Q1	18.80	22.76	12.11	28.70	82.58
Q2	19.98	25.28	13.19	30.15	88.80
Q3	21.32	27.82	14.21	31.22	94.79
Q4	22.26	29.24	15.14	32.47	99.34
2021 Q1	22.84	30.19	15.75	33.75	102.80
Q2	24.93	30.05	16.74	29.24	101.24
Q3	27.36	30.78	18.22	29.80	106.47
Q4	29.57	31.73	19.44	30.44	111.50

Appendix 11

Number of Bank Branches and Agents, ATMs, POS, and MFS Agents										
	Bank Branches		**Agent Banking Outlets**		**ATM Terminals**		**POS Machines**		**MFS Agents**	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
2019 Q1	5381	4915	750	7085	7484	2960	48200	1235	469924	449263
Q2	5385	4922	1009	7661	7532	3014	52535	1553	489768	444356
Q3	5428	4927	1243	8149	7585	3134	52674	1678	508592	441358
Q4	5541	5027	1738	9581	7665	3259	56043	2484	517170	454374
2020 Q1	5565	5027	1463	10520	7737	3296	60193	4913	523869	469631
Q2	5567	5030	1553	10895	7736	3311	61048	4898	526912	471579
Q3	5583	5047	1748	12263	7912	3415	61620	5486	539251	477804
Q4	5522	5149	1962	13946	8407	3516	67045	6184	557908	500989
2021 Q1	5600	5167	2103	14317	8598	3627	72705	6549	558440	510817
Q2	5652	5136	2197	14950	8645	3692	75177	6921	605707	525437
Q3	5628	5180	2360	15713	8730	3765	78567	7250	630932	511413
Q4	5700	5239	2654	16593	8928	3903	84414	7672	599309	524149

Source: Statistics Department, BB