

Payment and Settlement Systems

10.1 Payment systems are the means by which funds are transferred among financial institutions, businesses, and persons. Payment systems are considered as the most important factor for the well functioning of a country's financial system and for successful application of monetary policies by the central banks. Moreover, cross-border connections of the payment systems become essential for development of a country and for attracting foreign capital and foreign investors.

10.2 Under Article 26 of the Bangladesh Bank Order (BBO), 1972 Bangladesh Bank (BB) through its Department of Currency Management & Payment Systems performs core functions relating to issuance of notes and coins and management of currencies in circulation. Also Article 7A(e) of the BBO empowers BB to promote, regulate and ensure a secured and efficient payment system in the country.

National Payment Systems: Current Scenario

10.3 The present payment and settlement system in Bangladesh is not at par with international best practices which emphasizes on safe and secured payments and settlements and the reduction of the gap between payments and settlement. Under the present clearing system, customers can use funds on t+2 or t+3. The collections of interregional cheques take much longer time to clear. However, with these changing and demanding times, more rapid payments need to be initiated. The current environment has led commercial banks to maintain idle funds solely for settlement purposes and beyond any economic or business purpose. This liquidity is a burden to the banks. Moreover moving funds from one

place to another is expensive and results in poor liquidity management. Besides, there are many risks involved in end-of-day settlements. Based on the Core Principles for Systemically Important Payment Systems recommendations by the CPSS, Bangladesh Bank is moving towards developing a safe and efficient payment system that is core principles compliant.

Clearing and Settlement Systems

10.4 At present, four clearing systems are operating in Bangladesh. They are: (a) Bangladesh Bank's Clearing Houses in Dhaka and its branches in seven other cities; (b) Sonali Bank's Clearing Houses in 31 cities where there are no BB branches; (c) the BB large value cheque settlement system; and (d) the Bangladesh Bank Foreign Currency Clearing System in Dhaka which clears and settles foreign currency cheques and pay orders by the Forex Reserve and Treasury Management Department (FRTMD).

10.5 There are four clearings each day at the BB's clearing house in each branch. The first clearing starts at 9:30 am and returns of the first clearing are at 5:30 pm. The Same Day clearing starts at 11:00 am and returns occur at 2:00 pm. The instruments cleared through the clearing houses are cheques, bank drafts, pay orders, dividend warrant, etc. drawn on commercial banks and BB. Except Barisal and Rangpur office, other branch offices of BB have a computerized settlement process where the commercial banks, in addition to the physical instruments, present diskettes that contain each bank's paying obligations and receivables from other banks. Compared to the volume in Dhaka and Chittagong, the cheques cleared in outstation branches are insignificant.

TT Discounting Facilities

10.6 According to the section 330(1) of BD Manual Bangladesh Bank allows TT Discounting facilities to the scheduled banks against the collateral of Government securities. Banking Regulation and Policy Department of Bangladesh Bank fixes the limit (bank-wise) for discounting. Branch offices extend the facility to the scheduled banks based upon their requirement within their limit. The charge of TT Discount is 00.02%.

10.7 During FY08 eighteen (18) scheduled banks availed TT Discounting facilities of Tk. 3284.21 crore from different branches of Bangladesh Bank which was 40.13 percent higher compared to Taka 2343.63 crore in the previous year.

10.8 Bank-wise TT discounting facilities availed by scheduled banks in 2007-08 are stated in Table 10.1.

Payment Instruments

10.9 Owing to its intrinsic convenience, cash continues to be the predominantly used medium of transactions in Bangladesh. Bangladesh Bank makes efforts to satisfy transaction demand for currency through a steady flow of currency notes and coins of all denominations. The domestic cheque system is the second most important payment medium for national payments. Cheques and payment orders drawn on commercial banks are widely used by the industrial and commercial sector and to a lesser extent by individuals. Cheques drawn on Bangladesh Bank are used by commercial banks, mainly for inter-bank transfers and for government payments, which are considered as large value transactions. The volume and value of cheques have grown steadily over the years.

10.10 Apart from non-cash payment instruments like cheques, drafts etc., card-based payments, which include credit card, debit card and ATM transactions, are gaining popularity. The commercial banks and the business community are trying to promote the use of credit and debit

(Tk. in Crore)

Sl. No.	Name of the Banks	Amount of TT Discount
1	Agrani Bank Ltd.	901.80
2	Bangladesh Krishi Bank	678.10
3	Rupali Bank Ltd.	655.10
4	Islami Bank Bangladesh Ltd	709.50
5	Uttara Bank Ltd.	16.63
6	AB Bank Ltd.	42.87
7	ICB Islamic Bank Ltd. (The Oriental Bank Ltd.)	63.45
8	City Bank Ltd.	9.70
9	IFIC Bank Ltd.	11.57
10	United Commercial Bank Ltd.	3.00
11	Eastern Bank Ltd.	0.70
12	National Credit & Commerce Bank Ltd.	1.45
13	Prime Bank Ltd.	22.25
14	Basic Bank Ltd.	19.10
15	Mercantile Bank Ltd.	1.05
16	Dhaka Bank Ltd.	5.11
17	The Premier Bank Ltd.	115.75
18	Jamuna Bank Ltd.	27.08
	Total	3284.21

cards, point of sale transactions and direct debits. The use of such payment instruments, however, is popular in the urban areas only and the volume of such transactions is yet to reach a significant level.

Regulation & Oversight

10.11 Article 7 A (e) of the Bangladesh Bank Order (BBO), 1972 states that one of the Bank's functions shall be - "To promote, regulate and ensure a secure and efficient payment system, including the issuance of bank notes". Also Article 82(1) of the BBO, 1972 empowers the Bangladesh Bank to issue regulations in order to give effect of the payment functions.

Remittance issues

10.12 Inward remittance sent by the migrant workers from abroad has been a prime source for mitigating the Balance of Payments (BOP) gaps in Bangladesh. According to the Bangladesh Bank database of Wage Earners Remittance Inflows (Monthly) the total inward remittances for the month of April 2008 was

USD 781.11 million. But a good amount of inward remittances are finding their way to the country through the informal channels. Different studies show that a significant amount of the total remittance inflow is received through the informal channels often known as hundi, or hawala. Also cost of sending remittance to Bangladesh is based on per transaction so the small remitter has to pay the same cost of a large remittance. Sometimes the long-distance of migrant worker's residences & dwelling places from the exchange houses/banks hinder them of remitting money frequently. Major portion of the migrants have little educational background; they face problem with language and exchange house/banks formalities overseas. They have little or no knowledge about the banking system. As a result they face problem to complete the banking formalities. Again, beneficiaries and the remitter sometimes have no local bank accounts.

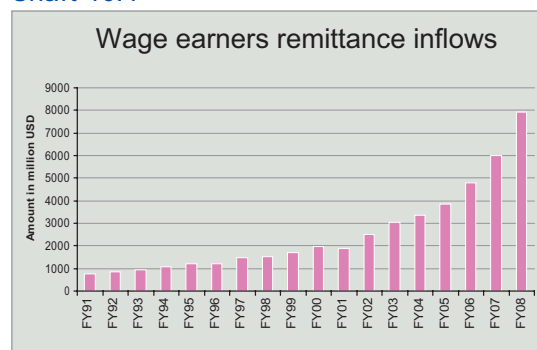
Initiatives for Modernizing Payment and Settlement Systems

10.13 The modernization of the payment and settlement system has become a top priority of Bangladesh Bank (BB). BB has taken the lead to ensure that a safe and efficient system is developed and maintained to facilitate smooth operations of payment systems for the stability of financial markets in Bangladesh.

10.14 Over the past few years, Bangladesh Bank has been actively working on the development of modern payment systems in Bangladesh. "Remittance and Payments Partnership" (RPP) Project funded by DFID-UK, has been undertaken by Bangladesh Bank for modernizing country's payment system. Significant effort has been expended in reviewing the existing payment systems to define a long-term strategy for payments in Bangladesh. The RPP project has three components -

- **Component I:** Establishing a modern payment and settlement system infrastructure

Chart 10.1



- **Component II - Remittance and Payments Challenge Fund:** Encourage innovative project proposal for inward remittances and productive use of remittances
- **Component III - RMMRU and IOM:** Build migrant workers awareness through media campaign (electronic/print) for sending remittances through formal channel and conduct household survey to collect information of migrant families.

Payment Systems Modernization

10.15 Designing, planning and implementing a National Payment System (NPS) is a difficult and complicated undertaking. It represents a dynamic and constantly changing field of knowledge that is vital to a country's fiscal & economic stability possessing challenging issues particularly for a developing economy like Bangladesh. It requires real-life knowledge of the economy's attributes and needs; the market drivers; an intimate understanding of the market's ability to absorb, sequence and implement changes; and the capacity to assess various approaches to initiate reforms in the existing national payment system.

Institutionalization

10.16 **Payment Systems Division (PSD):** As an essential part of the national payment systems modernization process, a Payment Systems Division (PSD) has been established under DCMPS, for developing expertise on the

core competencies of payment systems policy and operations through team-based, cross-disciplinary intense training programme to this core working Group (CWG) on various aspects of payment systems under active guidance of internationally experienced payment systems consultants.

10.17 National Payment Systems Council (NPSC): One major motivation for change, for improvement in payment systems in Bangladesh is the need to keep up with the rest of the world, to meet international standards. To improve the payment systems in Bangladesh, in particular the interbank payment system will require the cooperation and coordination of many stakeholders, the banks, the private sector, relevant government ministries, the regulators, and central bank. The National Payment Systems Council (NPSC), an essential central institution, was established this year for the improvements and promotion of payment systems for the national and public interests.

10.18 The NPSC is made up of representatives from selected number of banks and other significant stakeholders such as Ministry of Finance (MOF), Ministry of Commerce (MOC), Comptroller General of Accounts (CGA), Bangladesh Telecommunication Regulatory Commission (BTRC) and is chaired by the Deputy Governor in charge of the Department of Currency Management and Payment Systems, Bangladesh Bank. The NPSC will be the central vehicle for formulating strategy for the transfer of information, on policy and practice, and of technology for payment systems in Bangladesh. It will also be the vehicle for mobilizing resources, human, financial and physical, for undertaking payment system improvements. NPSC will workout the long-term strategy and implementation priorities for payment systems in Bangladesh. This will include all forms of payments from cheque processing to retail payments including card payments and ATMs to interbank payments. Provision will also be made for the settlement of securities and foreign exchange payments. The NPSC will be supported by the working groups.

10.19 **Working Groups:** Four working groups i.e. Strategy Working Group (SWG), Legal & Regulatory Group (LWG), Remittance Working Group (RWG) and ACH Working Group (ACHWG) have been formed to work on their respective areas and to provide necessary support to the NPSC. Each of the teams are comprised of commercial bank officials and headed by a senior BB official. PSD provides support services to the working groups.

Payment and Settlement Systems Strategy

10.20 The first discussion paper of the National Payment and Settlement Systems Strategy as adopted in the 2nd meeting of the NPSC held on 13 December 2007. In brief the strategies are -

1. Implement Bangladesh Automated Clearing House (BACH) comprised of Automated Cheque Processing System and Electronic Fund Transfer (EFT)
2. Establish required legal and regulatory framework.
3. Promote and encourage e-payments, use of shared ATMs, POS, mobile payments, etc.
4. Establish Payment System Oversight
5. Encourage initiatives towards establishing payment systems by private sector
6. Encourage on-line banking, adopt core banking solution and improve General Ledger and related other Departments/offices of Bangladesh Bank.
7. Implement Real-Time Gross Settlement (RTGS)

Bangladesh Automated Clearing House

10.21 Bangladesh Automated Clearing House (BACH), the automated payment systems platform, has two components - the first is Bangladesh Automated Cheque Processing Systems (BACPS) and the second is Bangladesh Electronic Funds Transfer Network (BEFTN).

10.22 Both the systems will operate in batch processing mode - transactions received from the banks during the day will be processed at a pre-fixed time and will be settled through a single multilateral netting figure on each individual bank's respective books maintained with Bangladesh Bank.

10.23 Bangladesh Automated Cheque Processing Systems (BACPS) will implement cheque imaging and truncation for automated cheque processing. Accordingly the cheque design has been standardized. The size, security features and paper specifications have been informed to the financial institutions. Also new routing numbers have been assigned to the bank branches for easy identification of origin and destination of a cheque. The new cheques will contain Magnetic Ink Character Recognition (MICR) line which has been designed to provide information on the amount, transaction code, clients account information, routing number and the cheque leaf's serial number. The system will support both intra-regional and inter-regional clearings. The system is based on a centralized processing centre located in Dhaka and its Service Branches at 64 districts. The proposed processes and systems will conform to best practices and also will represent the most cost effective solution for cheque processing.

10.24 Bangladesh Electronic Funds Transfer Network (BEFTN) will operate as a processing and delivery centre providing for the distribution and settlement of electronic debit and credit instruments among all participating banks. The BEFTN Network is envisaged as a system of participating banks connected with the EFT Operator via communication lines. This network will facilitate the transmission of payments between the banks electronically, which will make faster and efficient means of inter-bank clearing than the existing paper-based system. The Network will start with simple credit transactions and gradually progress to debit transactions. This will dramatically bring down the operational cost, reduce risk and will also increase the efficiency of the payments process.

Legal & Regulatory Framework

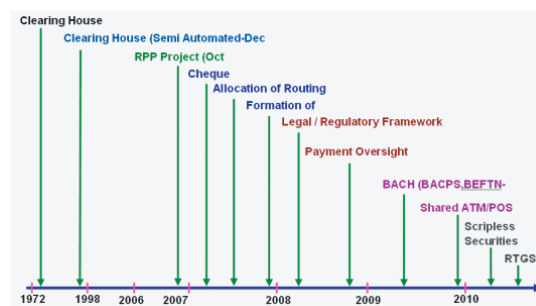
10.25 To develop a suitable legal and regulatory framework for the new payment and settlement systems, a draft Bangladesh Payments and Settlement Systems Regulations, 2008 has been prepared. Documents under preparation are-BACPS Operating Directives, BEFTN Operating Directives, BEFTN Risk Management Guidelines, etc.

Remittance Issues

10.26 Increasing importance of remittance being the major source for foreign exchange has drawn the attention of decisionmakers for encouraging the remitters to use formal channel instead of risky informal channel. The scheme of PSD to improve the scenario are - raising awareness among migrant workers in home and abroad, introducing new remittance and transfer products, improving of existing remittance infrastructure, innovative use of remittances, setting up information booth in selected locations for information access by the remitters and migrant workers, and simplifying the remittance sending procedure.

Implementation Roadmap

10.27 The initiatives will be implemented according to the Payment and Settlement Systems Strategy phase by phase. Following is the timeline along with the major steps taken for developing payment systems in Bangladesh.



Remittances and Payments Challenge Fund (RPCF)

10.28 The component II of the RPP project, the Remittances and Payments Challenge Fund

(RPCF) is a £ 2.1 million (Tk.28 crore) risk-sharing grant facility which will stimulate and catalyze the innovation of new remittance and transfer products, improvements to existing remittance infrastructure, and use of remittances. Grants are awarded to part-fund commercial projects in the private and NGO sectors. The Challenge Fund grant award mechanism is a two-stage process whereby short concept notes are prepared by grant applicants and, following evaluation, applicants with concepts that are deemed meritworthy prepare a full grant application. The process revolves around Challenge Fund Rounds, where all concepts received in a six month period are evaluated in competition with each other.

10.29 RPCF has a three tier governance structure: the RPP Project Oversight Board (POB), an independent Assessment Panel (AP), and the RPCF managers. The POB, under the chairmanship of the Governor of Bangladesh Bank, provides strategic direction for RPCF and is responsible for the selection of the members of the AP. The AP, under the Chairmanship of Bangladesh Bank, assesses concept notes prepared by grant applicants, selects projects that meet set criteria, reviews full grant applications and approves grants. The RPCF managers are responsible for the day to day management of the challenge fund, including awareness raising with potential grant recipients; and project cycle management, including helping applicants in the finalization of their project concepts, due diligence, grant contracting, grant payment management, grant project monitoring and assessment. The RPCF managers are assisted by other RPP experts who provide their observations on project concept notes and full grant applications.

10.30 It has completed two 'rounds' where the private and NGO sectors have submitted a total

of 90 concept notes; out of which 10 concept notes received grant funding (total £1.7m) after thorough assessment by the Challenge Fund Assessment Panel. 27 concept notes have been submitted to RPCF in the third round from which 5 concept notes have been selected for submitting full application which are subject to further evaluation. The third round will be completed by November 2008.

Awareness Outreach Campaign

10.31 Two organization are working on the component III for raising awareness of migrant workers and their families through media campaign (electronic/print) on sending remittances through formal channel.

10.32 One designated NGO is working for electronic media campaign regarding migrant remittances, launched their media campaign where a training kit on remittance transfer and utilization were presented.

10.33 Another organization has launched its information campaign through print media for outreach programme to familiarize remittance sending through formal channel and household survey to collect information on migrant families.

10.34 Increasing trade and investment flows are already putting pressure on the demand for financial services to exceed the present performing levels of efficiency. So, need for an efficient and cost-effective payment and settlement system, is gaining amplified importance. The initiative of Bangladesh Bank will have a significant impact on the financial sector of Bangladesh and monetary policy formulation resulting in a sound payment and settlement system consistent with its neighbors and international standards.

Box-10.1

Information Technology in the Bangladesh Bank

Bangladesh Bank started its ICT journey in 1980 with IBM 370 Main Frame computer and also started in-house software development. Since then Bangladesh Bank along with its own automations assisted different government offices and banks such as President Secretariat, National Board of Revenue, Sonali Bank, Agrani Bank, Janata Bank, Rupali Bank, House Building Finance Corporation etc. for automation of their specific activities.

Bangladesh Bank automated several activities in its policy areas, operational areas, prudential supervision areas, Enterprise Resources management areas and communication areas. These are mainly processing of export, import, advance, deposit data to generate customized reports, local and foreign currency clearing system, Treasury Management System, import monitoring, export form matching, Credit Information Bureau, CAMELS rating, Banking Inspection System, payroll, Human Resources Management System, Bangladesh Bank Website etc. So far sixty (60) different in-house applications have been developed and are in operation, eighteen (18) applications are in development/implementation stage.

Bangladesh Bank is continuously supporting banks and financial institutions for their ICT developments providing "ICT Guidelines" to create ICT policy for their security in financial transactions. Bangladesh Bank also inspects all banks regularly to ensure their ICT compliance.

Bangladesh Bank started Central Bank Strengthening Project funded by the World Bank of which about 70% expenditure will be in Information Technology components. IT components include Networking, Banking application, Enterprise Resources Planning Solution, Enterprise Data Warehouse Solution, Intranet Solution.

Networking will connect all departments of head office and all branch offices with Head Office, implement Intranet for all officials to develop a Knowledge Management Information base, ensure data security by implementing Data Center and Disaster Recovery Site (DRS). Data security will be ensured with the synchronously backup (online real time) at the DRS. All business applications will run on this IT network.

Enterprise Resources Planning will cover automation of General Ledger and Accounting, Purchasing (Purchase Order Processing), Accounts Payable, Accounts Receivable, Cash Management, Fixed Assets, Human Resources and Payroll Application, Budget and Cost Centre Accounting System.

Banking will cover automation of Banking Application System/Module, Bank and Government Accounts, Loans and Other Lending Activities, Cashier/Teller Functions, Risk Management, Reconciliation Application, Foreign Exchange Management, Currency Management and Accounts, Treasury and Securities Systems/Module, Public Debt Management Module and Trade Finance.

Enterprise Data Warehouse will cover automation of Financial sector statistics, Monetary statistics, Foreign exchange statistics, Balance of payments statistics, Other Statistics relating to the Bangladesh economy, Time series analysis, Economic analysis and reporting, Monetary analysis and reporting, Financial sector analysis and reporting, Balance of payments analysis and reporting and Econometric modeling.

Bangladesh Bank is also going to implement Bangladesh Automated Clearing House (BACH) Solution and Credit Information System Solution funded by DFID that will improve performance of the financial industry as a whole.

Bangladesh Bank wishes to maintain internationally acceptable industry standard interconnectivity between the application systems to be procured under CBSP and DFID and existing all available resources. Existing in-house application software will be interfaced or converted or migrated to new systems considering optimum user friendliness.

Bangladesh Bank is committed to provide its best effort to improve the efficiency and effectiveness of its activities using appropriate Information Technology.