

Payment and Settlement Systems

12.1 Payment and settlement system consists of a set of physical & electronic infrastructures with associated procedures for the transfer and settlement of financial obligations arising from the exchange of goods and services. It facilitates the central bank for conducting efficient monetary policy by better use of market-based instruments to achieve its objectives.

12.2 **Functional Areas of Payment Systems:** According to the 7 A(e) of the Bangladesh Bank Order, 1972, one of the main functions of the Bangladesh Bank is - "to promote, regulate and ensure a secure and efficient payment system, including the issue of bank notes." In fulfilling this mandate and considering the importance of having a state-of-the-art payment and settlement systems for Bangladesh, Payment Systems Department (PSD) of Bangladesh Bank (BB) has been working on payment systems strategy, automated cheque processing system, electronic funds transfer, national payment switch, mobile financial services, agent banking, e-commerce, m-commerce, legal & regulatory framework for electronic payment systems and payment systems oversight in order to modernise country's payment system to be safe and efficient in compliance with international standards.

12.3 **Traditional Payments Scenario:** The traditional paper based payment system was semi-automated, time consuming and

prone to many risks. The system was not at par with international best practices. It took t+2 or t+3 days to clear the cheques and other paper based instruments within a clearing region. The inter-regional instruments required even much longer time to clear. Four payment and settlement systems had been in operation in Bangladesh prior to 7 October 2010. The instruments like cheques, bank drafts, pay orders, dividend & refund warrants, etc. were being cleared through the manual clearing houses. Apart from such non-cash payment instruments credit card, debit card and ATM transactions were becoming popular specially in the urban areas.

12.4 **Payment Platforms Operating at Present:** Bangladesh Automated Cheque Processing System (BACPS) started its live operation from 7 October 2010 for developing an electronic payment system in the country. Later, electronic funds transfer, e-commerce, mobile financial services and m-commerce added in to the system for further modernisation of the payment and settlement systems as set in the strategy. These payment platforms are briefly described in the following sections.

12.5 **Bangladesh Automated Clearing House (BACH):** BACH has two components- the Automated Cheque Processing System and the Electronic Funds Transfer. Both the systems operate in batch processing mode- transactions received from the banks during

the day are processed at a pre-fixed time and settled through a single multilateral netting figure on each individual bank's respective books maintained with the Bangladesh Bank. A Virtual Private Network (VPN) has been working between the participating commercial banks and Data Centre (DC) & Disaster Recovery Site (DRS) for communicating necessary information related to BACH. Digital Certificate has also been formulated in Bangladesh for secured data communication.

12.6 Bangladesh Automated Cheque Processing Systems (BACPS): BACPS uses the Cheque Imaging and Truncation (CIT) technology for electronic clearing of the paper-based instruments, i.e. cheque, pay order, dividend & refund warrants, etc. The system supports both intra-regional and inter-regional clearing and is based on a centralised processing centre located in Dhaka and in designated clearing regions.

The system conforms to the international best practices and also represents the most cost effective solution for cheque processing throughout the country.

12.7 BACPS Transaction Status: At present around 1,877,857 regular and around 124,314 high value cheques & other instruments are cleared per month through BACPS. Total amount of regular value instruments cleared is approximately Taka 448 billion (monthly) and for high value instruments, the amount is approximately Taka 659 billion per month. The clearing cycle has been brought down to t+0 for high value cheques and t+1 for regular value cheques throughout the country. Chart 12.1 and

Chart 12.1 No. of regular value instruments cleared through BACPS and associated amount

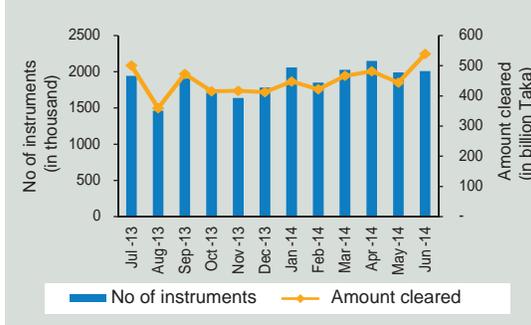


Chart 12.2 No. of high value instruments cleared through BACPS and associated amount

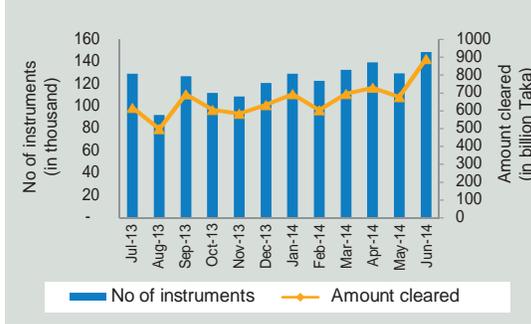


Chart 12.2 show the trends of instruments cleared and associated amount of the regular and high value cheques respectively in FY14.

12.8 Bangladesh Electronic Funds Transfer Network (BEFTN): BEFTN has started its 'Live Operation' from 28 February 2011 with the objective to encourage paper-less electronic payment methods for secured, faster & cost-effective transactions especially at the corporate levels. The network started with credit and debit transactions from 15 September 2011.

BEFTN becomes the faster and efficient means of inter-bank clearing over the existing paper-based system i.e. BACPS. A wide variety of credit transfers such as payroll, foreign and domestic remittances, social

security, company dividends, retirement, expense reimbursement, bill payments, corporate payments, Government tax payments, veterans payments, Government licence fees and person to person payments as well as debit transfers such as mortgage payments, membership dues, loan payments, insurance premiums, utility bill payments, company cash concentration, Government tax payments, Government licences and fees are settled under the network. At present, Cabinet Ministers' salaries, salary of the officials of Government agencies like Ministry of Finance, Anti Corruption Commission and salary of Government primary school teachers are being distributed through EFT.

12.9 Transaction Status of Bangladesh Electronic Funds Transfer Network (BEFTN): Approximately 690,961 EFT credit transactions and 24,421 EFT debit transactions are processed per month with an increasing trend. The amount of EFT credit and debit transactions are approximately Taka 37.8 billion and Taka 3.42 billion respectively per month. Chart 12.3 and Chart 12.4 show the trends of EFT credit and debit entries and associated amount respectively in FY14.

12.10 Mobile Financial Services (MFS): The rapid growth of mobile phone users and countrywide coverage of mobile operator's network have made their delivery channel an important tool-of-the-trade for extending banking services to the unbanked as well as banked population, specially to expedite faster delivery of remittances across the country.

From legal and regulatory perspective, only the bank-led model is allowed to operate in

Chart 12.3 No. of EFT credit entries and associated amounts

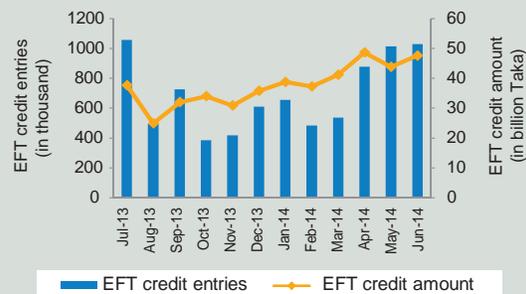
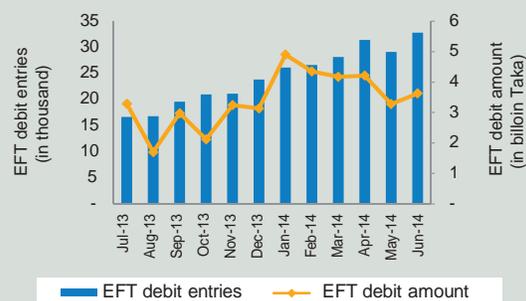


Chart 12.4 No. of EFT debit entries and associated amounts



Bangladesh. Table 12.1 lists the prevailing status of MFS in Bangladesh.

The approved mobile financial services (in broad categories) are as follows:

- Disbursement of inward foreign remittances.
- Cash in/out using mobile account through agents/bank branches/ ATMs/mobile operator's outlets.
- Person to business payments-e.g. utility bill payments, merchant payments.
- Business to person payments-e.g. salary disbursement, dividend and refund warrant payments, vendor payments, etc.

- Government to person payments-e.g. elderly allowances. Freedom-fighter allowances, subsidies, etc.
- Person to Government payments-e.g. tax, levy payments.
- Person to person payments (one registered mobile account to another registered mobile account).
- Other payments like microfinance, overdrawn facility, insurance premium, DPS, etc.

12.11 Mobile Financial Services Related

Other Information: Bangladesh Bank has set the maximum transaction limit for the account holders of mobile financial services at Taka 10,000 per day and Taka 25,000 on monthly basis. Bangladesh Post Office (BPO) introduced the - 'post e-pay', service from 5 September 2011 with 1968 branches which will gradually be launched in all branches (9,886) of the post office in phases with the help of the mobile operators' countrywide network. Clients have to register themselves with the post office to get the service.

12.12 **e-commerce:** BB has issued directives for the banks for starting e-commerce activities. Permitted transactions are -

- Online payment of utility bills from client's accounts to recipient's accounts,
- Transfer of money within different accounts of a client in the same bank, payment/collection of money from/to buyer's bank account to seller's bank account for buy/sale of products,

Table 12.1 MFS Status

No. of banks permitted	:	28
Started MFS operation	:	20
Registered customers	:	16.7 million
Agents	:	0.41 million
Transactions (BDT)	:	85.23 billion

*as of June 2014

- Transaction via internet using credit card in local currency.

From 11 March 2011, permission has been given to transfer less than Taka 500,000 from one client's account to another client's account within the same bank using internet/online facilities subject to the fact that it will fully comply with prevailing money laundering Prevention legislations and related circulars.

12.13 Online Payment Gateway Service

Providers (OPGSPs): In view of the growing role of the services provided by the Online Payment Gateway Service Providers (OPGSPs), Authorised Dealers (ADs) are now allowed to offer the facility of repatriation of remittances against small value service exports in non-physical form such as data entry/data process, off-shore IT service, business process outsourcing etc. The exporters of the above services will be able to receive their overseas payments through the OPGSPs such as Paypal, Money Bookers, Best Payment Gateway and Virtual Pay online platforms.

12.14 New Payment Systems Initiatives:

In order to fulfill the ever growing demand for faster and efficient payment methods Bangladesh Bank has taken a number of new initiatives like National Payment Switch (NPSB), Real Time Gross Settlement (RTGS).

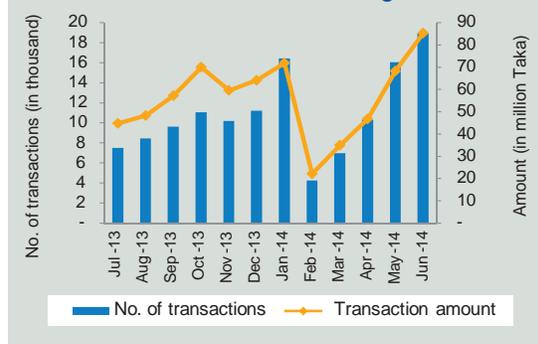
12.15 National Payment Switch Bangladesh (NPSB): Implementation of National Payment Switch (NPS) has been started in order to facilitate inter-bank electronic payments originating from different delivery channels e.g. Automated Teller Machines (ATM), Point of Sales (POS), internet, mobile applications, etc. The main objective of NPSB is to facilitate the expansion of the retail payment networks substantially and promote e-commerce throughout the country.

Online payment of Government dues through internet will greatly be enhanced using NPSB. NPSB has been launched as "soft go-live" from 27 December 2012 and now inter-bank ATM transactions among 17 banks are being routed through NPSB. Other banks are also likely to join to NPSB. The number and volume of the interbank ATM transaction through NPSB are growing rapidly. PSD is also drafting some operating rules regarding NPSB system. Chart 12.5 shows the trends of NPSB interbank ATM transaction number and associated amount till 30 June, 2014.

12.16 Real-Time Gross Settlement (RTGS): Bangladesh Bank has taken initiative to establish Real-Time Gross Settlement (RTGS) with the financial support of Asian Development Bank (ADB) which will enable instant settlement of high value local currency transactions as well as government securities and foreign currency based transactions.

12.17 Legal & Regulatory Framework: BB published a number of legal and regulatory documents to provide legal and

Chart 12.5 Trends of inter-bank ATM transaction through NPSB



regulatory support for electronic transfer of funds. Existing legal and regulatory framework of payment and settlement systems of Bangladesh are mentioned below:

- "Bangladesh Automated Cheque Processing Systems (BACPS) Operating Rules and Procedures" has been published on 11 January 2010.
- "Guidelines on Mobile Financial Services for the banks" has been published on September 2011.
- "Bangladesh Payment and Settlement Systems Regulations (BPSSR), 2014" has been published on 15 May 2014.
- "Bangladesh Electronic Funds Transfer Network (BEFTN) Operating Rules" has been published on 15 May 2014.
- "Guidelines on Agent Banking for the Banks" has been published on 9 December 2013.

12.18 In cooperation with World Bank (IFC-BICF) BB drafted Payment Systems Act and its finalisation is in process. However, "Guidelines on Agent Banking for the Banks" has been published on 9 December 2013.

12.19 Awareness Raising Campaign:

Bangladesh Bank had taken a number of initiatives for raising awareness on the new electronic payment systems like automated cheque processing, electronic funds transfer and mobile financial services. BB organised seminars and workshops for officials of all commercial banks, Govt. offices and industry alliances. Besides, BB has been working to popularise electronic funds transfer network among the stakeholders like Chamber of Commerce's, Stock Exchanges, Bangladesh Security and Exchange Commission, Central Depository Bangladesh Limited, National Board of Revenue etc.

12.20 Electronic payment and settlement systems have already proved their potential by offering fast, secure and cost-effective

financial services. Specially, paper-less EFT transactions are gaining increasing popularity among the corporate bodies, stock exchange members and industry alliances. The mobile financial services, m-commerce and e-commerce are significantly changing the financial services landscape of the country. NPSB will increase end-user centric electronic payments and broaden the landscape for financial transactions in the country. These electronic modes of payment have already improved operational efficiency, increased transaction frequency and brought stability & flexibility in all spheres of the financial market. Implementation of RTGS will result in an effective and efficient 'National Payment and Settlement System' consistent with international standard.