

## 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 using market-based instruments to achieve its objectives.

12.2 Bangladesh, Payment Systems Department (PSD) of Bangladesh Bank (BB) has been working to develop payment systems strategy, automated cheque processing system, electronic funds transfer, national payment switch, mobile financial services, agent banking, e-commerce, m-commerce and legal & regulatory framework. It aspires to modernise country's payment system to make it safe and efficient matching the international standards enabling faster economic growth and access to financial service to all citizens of Bangladesh.

12.3 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. Four payment and settlement systems were 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 and debit cards, and ATM transactions have already become popular in Bangladesh, especially in the urban areas.

### **Bangladesh Automated Cheque Processing System (BACPS)**

12.4 Bangladesh Automated Cheque Processing System (BACPS) started its live operation on 7 October 2010 for developing an electronic payment system in the country. Later, electronic funds transfer, e-commerce, mobile financial services and m-commerce joined 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) has two components-the automated cheque processing system and the electronic funds transfer system. Both 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 established between the participating commercial banks and Data Centre (DC) and Disaster Recovery Site (DRS) for

communicating necessary information related to BACH. Digital Certificate has also been formulated in Bangladesh for secured data communication.

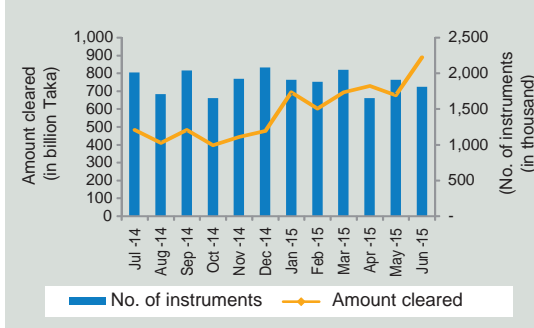
12.6 BACPS uses the Cheque Imaging and Truncation (CIT) technology for electronic clearing of the paper-based instruments, i.e. cheque, pay order, dividend & refund warrant, etc. The system supports both intra-regional and inter-regional clearing and is based on a centralised processing centre located 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 At present around 1.90 million regular and around 0.143 million high value cheques and other instruments are cleared per month through BACPS. Total amount of regular value instruments cleared is approximately Taka 582 billion per month and for high value instruments, the amount is approximately Taka 774 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 12.2 show the trends of instruments cleared and associated amount of the regular and high value cheques respectively in FY15.

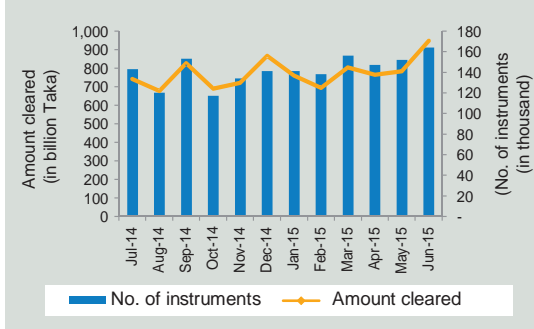
**Bangladesh Electronic Funds Transfer Network (BEFTN)**

12.8 BEFTN started its 'Live Operation' on 28 February 2011 with the objective to encourage paper less electronic payment methods for secured, faster and cost-effective transactions specially at the corporate levels.

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



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



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 are settled under the network. At present, 55 Government agencies including Cabinet Ministers' salaries are being distributed through EFT.

12.9 Approximately 1.0 million EFT credit transactions and debit transactions are processed per month with an increasing trend. The amount of EFT credit and debit transactions are approximately Taka 62.75 billion per month. Chart 12.3 shows the trends of EFT credit and debit entries and associated amount respectively in FY15.

### Mobile Financial Services (MFS)

12.10 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/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 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, etc.
- 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.

Chart 12.3 No. of EFT entries & associated amount

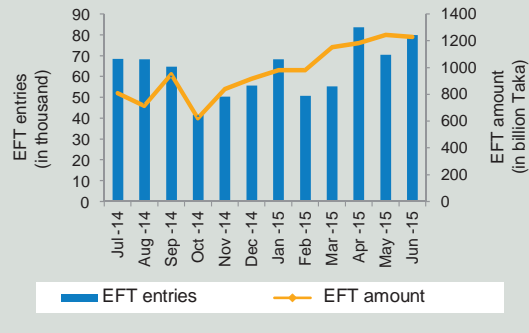
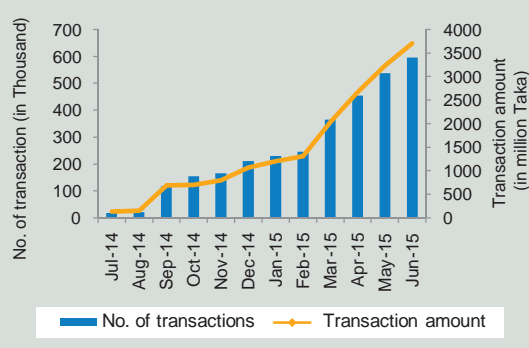


Chart 12.4 Trends of inter-bank transactions through ATM



- Person to Government payments e.g. tax, levy payments, etc.
- 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 Bangladesh Bank has fixed limits for cash in and cash out minimum Taka 25000 and maximum Taka 150000 respectively per month as well as for P2P transaction limit is Taka 10000 per day and Taka 25000 per month. Bangladesh Post Office (BPO) introduced the 'post e-pay' service from 5 September 2011 with 1968 branches which

**Box 12.1****Electronic Money**

Electronic money is a digital equivalence of cash, stored on an electronic device or remotely at a server. One common type of e-money is the 'electronic wallet', where users store relatively small amounts of money on their payment cards or other smart cards, to use for making small payments. But e-money can also be stored on (and used via) mobile phones or in a payment account on the internet.

E-money is first introduced in Bangladesh for transport service with a card named Xpass. Even with huge opportunity it was not successful due to lack of enough public awareness. Later commercial banks introduced prepaid cards with stored value for certain brands/super shops. But the real thrust came with the introduction of mobile financial services. DBBL mobile services and bKash changed the e-money landscape of the country. Now 12.2 million account holders transact Taka 460.38 crore everyday through 3.2 million transactions.

Bangladesh Bank encourages private sector to generate innovative idea to popularise electronic money. i-Pay Limited and Aamra Boloro Bangladesh Limited are awarded licences to work as payment systems operators. Hopefully these two electronic money providers will be in operation by the end of this year.

BB is very keen to enable new, innovative and secure electronic money services to be designed, to provide market access to new companies and to foster real and effective competition among all market participants.

will gradually be launched in all branches (9,886) of the post office in phases with the help of the mobile operators' countrywide networks. Clients have to register themselves with the post office to get the service.

**e-Commerce**

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

- Online payment of utility bills from clients' accounts to recipients' 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 (as on June 2015)**

No. of banks permitted	28
Started MFS operation	20
Registered customers	28.64 million
Number of agents	0.53 million
Transactions (BDT) per day	4.32 billion

- Transactions via internet using credit cards in local currency.

Since 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.

### Online Payment Gateway Service Providers (OPGSPs)

12.13 In view of the growing role of the services provided by 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.

### New Payment Systems Initiatives

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

12.15 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" since 27 December 2012 and now inter-bank ATM transactions among 46 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 12.4 shows the trends of NPSB interbank ATM transaction number and associated amount till 30 June 2015. Bangladesh Bank is expecting bring POS transaction through NPSB very shortly.

12.16 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. Bangladesh Bank expects to launch RTGS within 2015.

### Legal & Regulatory Framework

12.17 BB has published a number of legal and regulatory documents to provide legal and 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" was published on 11 January 2010.
- "Guidelines on Mobile Financial Services for the Banks" was published on September 2011.
- "Bangladesh Payment and Settlement Systems Regulations (BPSSR), 2014" was published on 15 May 2014.

- "Bangladesh Electronic Funds Transfer Network (BEFTN) Operating Rules" was published on 15 May 2014.
- "Guidelines on Agent Banking for the Banks" was published on 09 December 2013.

12.18 In cooperation with World Bank (IFC-BICF) BB has drafted Payment Systems Act and its finalisation is in process.

#### **Awareness Raising Campaign**

12.19 Bangladesh Bank has 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 has organised seminars and workshops for officials of all commercial banks, Government offices and industry alliances. Besides, BB has been working to popularise electronic funds transfer network among the stakeholders like Chambers of Commerce, 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, papers 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 and 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.