

5th SAARC Payments Council Meeting

5th SAARC Payments Council Meeting was successfully concluded on 29 March 2009 in Kathmandu, Nepal. The meeting was attended by Mr. Krishna Bahadur Manandhar, Deputy Governor, Nepal Rastra Bank (NRB), Mr. Aziz Baraki, Deputy General Director, Da Afghanistan Bank, Mr. Chowdhury Mohidul Haque, Executive Director, Bangladesh Bank, Mrs. Rinzin Lhamu, Head, Banking Division, Royal Monetary Authority of Bhutan, Mrs. Shyamala Gopinath, Deputy Governor, Reserve Bank of India, Mr. G Gopalakrishna, Executive Director, Reserve Bank of India,



Mrs. Aishath Zahira, Deputy Governor, Maldives Monetary Authority, Mr. Mansur-ur-Rehman Khan, Deputy Governor, State Bank of Pakistan and Mrs. J P Mampitiya, Director, Payments & Settlements, Central Bank of Sri Lanka.

As Dr. Ranee Jayamaha, Chairperson SPC could not attend the meeting due to official commitments in Sri Lanka, Mr. Krishna Bahadur Manandhar, Deputy Governor NRB chaired the meeting. As all members have initiated Payment System related development in their respective countries, it was decided to have future SPC meetings on a half yearly basis. Accordingly, the Royal Monetary Authority of Bhutan agreed to host the 6th SPC meeting in Bhutan.

Recent PSS Developments In India

Reserve Bank of India

The convenience provided by the use of plastic money for making payments / cash withdrawals needs no elaboration. However, the risks come bundled with the convenience in this mode of payment. The Reserve Bank of India (RBI) has further undertaken a number of initiatives for smooth operations of these modes of payment systems.

1. Card companies now regulated

With the RBI being legally conferred powers for regulation and supervision of payment systems, all entities desirous of operating a 'payment system' in the country need to obtain authorisation from the RBI.

The card companies, viz., MasterCard International Incorporated, VISA International Service Association and American Express Banking Corp (AEBC) have been given authorization subject to certain terms and conditions.

2. Regulatory steps undertaken by the RBI

The other steps taken by the RBI for further enhancing security and customer convenience exercising its powers

conferred under the Payment and Settlement Systems Act, include:

i. Security in Card based payments

The use of credit/debit cards has been increasing in the country. In order to make the payment through this mode safer, especially for transactions done on-line (card not present), the RBI reviewed various options to enhance the security of online card transactions. After extensive consultations with banks/ card companies, the following additional third factor authentication process has been implemented from 1st August 2009:

- (a) A system of providing for additional authentication / validation based on information not visible on the cards for all on-line card not present transactions.
- (b) A system of “Online Alerts” to the cardholder for all ‘card not present’ transactions of the value of Rs.5,000 and above.

ii. Issuance of pre-paid payment instruments

Consequent to the passing of the Payment and Settlement Systems Act, 2007, all persons currently operating payment systems involved in the issuance of Pre-paid Payment Instruments and those proposing to operate such systems are required to seek authorisation from the RBI. To ensure orderly development and operation of pre-paid payment instruments in the country, the RBI issued a set of guidelines in April 2009.

iii. ATMs - cash withdrawal

Banks started deploying ATMs for providing better services and convenience to their customers. However, charges levied for these transactions were often high and were non-transparent. The RBI after a review

issued a directive making cash withdrawal from ATMs free of charge with effect from April 1, 2009.

Although apprehensions were expressed that the removal of service charges would have an adverse impact on setting up ATMs, so far, there appears to be no impact on setting up new ATMs by banks. During April to June 2009 nearly 3,500 new ATMs have been deployed, bringing the total number of ATMs to 47,150 as at the end of June 2009.

iv. Cash Withdrawal at Point-of-Sale (POS)

Cash is still predominantly used for small value payments and thus the need for currency. Cash is withdrawn at the counters of banks or at ATMs using cards. However, taking into account the need to enhance the outlets for cash disbursement of a small value, it was decided to make the facility of cash withdrawal at POS available for all debit cards issued in India, upto Rs. 1,000/- per day. The banks will have to obtain the approval of their Boards of Directors for offering this facility. The note to the Board should incorporate the product profile, risk perceived by the bank and the risk mitigation measures.

Good Bye

**Dr. Rane Jayamaha,
Deputy Governor, Central Bank of Sri Lanka**

Dr. Rane Jayamaha bids farewell to the SAARC Payments Council (SPC) upon her retirement from the post of Deputy Governor, Central Bank of Sri Lanka. The SPC wishes to pay special tribute to Dr. Jayamaha, the founder Chairperson of the SPC for the initiative taken to set up the SAARC Payments Initiative (SPI) and agreeing to have the first SPI Secretariat at the Central Bank of Sri Lanka. Her enthusiastic leadership, passion and insight to PSS development, and professional cooperation with the members of the region provided a well functioning forum for the development of PSS in the region. It is noted with pleasure that all countries in the region have commenced some level of PSS development since the inception of the SPI due to her untiring efforts. The SPC and the SPI Secretariat appreciate the efforts made by her and wish her a very happy and successful future.



Welcome

**Dr. Uthum Herat,
Deputy Governor, Central Bank of Sri Lanka**

Dr. Herat who succeeded Dr. Jayamaha, has taken over as chairman of the SPC. Dr. Herat is currently the Deputy Governor of the Central Bank of Sri Lanka overlooking the Financial System Stability Cluster. Prior to being appointed Deputy Governor, he was the Assistant Governor in charge of financial system stability. He has served as Alternate Executive Director for the Constituency of Bangladesh, Bhutan, India and Sri Lanka at the IMF. He is an economist by training, and a career central banker. He has held a number of posts in the Central Bank of Sri Lanka, including that of Director, Economic Research. We welcome Dr Herat as the chairman of the SAARC Payment Council.



The SAARC Payments Initiative Secretariat, with deep sorrow, wishes to announce the demise of Dr. Uthum Herat, the Chairman of the SPC and the Deputy Governor of the Central Bank of Sri Lanka, on 23rd, October, 2009.

Pakistan's National Payment System

PRISM (Pakistan Real-Time Inter-bank Settlement Mechanism)

State Bank of Pakistan

Pakistan Real Time Interbank Settlement Mechanism (PRISM) has successfully completed the first year of operations. The PRISM was launched on 1st July 2008 and since then has been successfully providing online real-time settlement services to the forty (40) participating institutions. All the commercial banks in Pakistan and three Development Finance Institutions (DFIs) are direct members of this system.

The system offers the following main services to its participants:

- Real time settlement of cash and government securities related payments. Multilateral net settlement of the cheque clearing is also done via the PRISM system.
- Settlement of government securities trades on Delivery versus Payment (DVP) basis.
- In case sufficient cash is not available in a participant's account, the payment can be queued for settlement at a later time as and when the cash becomes available. The participants have the full capability of managing their own queues.
- Participants also have the option of availing themselves of the fully collateralized Intraday Liquidity Facility (ILF).
- Online position monitoring of cash and securities balances is also available to the participants.
- State Bank of Pakistan (SBP) also manages a fully functioning help desk for the participants and addresses their complaints immediately.

The overall launch of the system was done in phases to enable the participants to adapt gradually to the system with minimum inconvenience. SBP was also able to handle



effectively any support issues during the initial days of the launch. Similarly, SBP fully facilitated the system participants in gradually moving from the cheque based payment mechanism to the new online real time system. SBP also released comprehensive "Rules & Regulations" for PRISM operations which were prepared after extensive deliberations with all the participants and internal stakeholders.

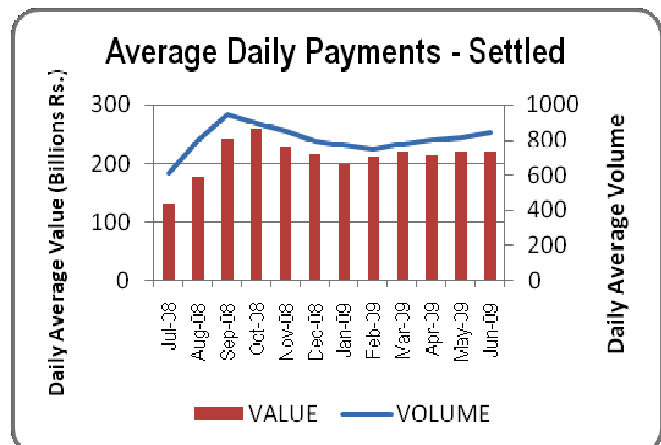
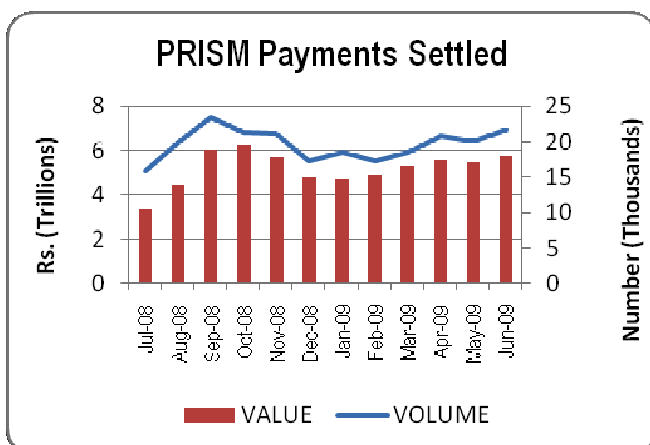
From July 2008 till June 2009, the PRISM system settled payments of around Rs. 59 trillion with a total volume of more than 220,000 payments. On average, the system settled around 750 daily payments valued at around Rs. 200 billion.

PRISM Payment Statistics: (2008-09)

Managing the System

Since starting operations, the PRISM has been running smoothly with no major disruptions. SBP has carried out effective oversight of the system to comply with the BIS core principles and international best practices. The transition from the cheque based system to the electronic form was smooth and did not face any major obstacle.

Managing RTGS operations is a complex process which includes ensuring continuous system availability, IT housekeeping, and dealing with vendors, including the



telecom provider. On the business side, daily operations have to be monitored with special emphasis on queue monitoring & management and participants have to be guided in managing their liquidity and ensuring gridlock resolutions. Most of the participants have also secured wireless connectivity in addition to the land telecom lines.

Benefits of RTGS:

- Advanced risk management tools like the queue management facility via payment prioritization, grid lock resolution, intra-day liquidity facility and real time information about participants' funds and securities positions and the fate of their payments (whether settled or queued) enables the banks to manage their liquidity position more efficiently. During the recent liquidity crisis, SBP's RTGS provided a very robust platform to the banks for ensuring prudent and secure position management.
- The RTGS System has also enhanced SBP's overall capability of monitoring the money market activities.
- With the core settlement engine in place, SBP is now working towards some new initiatives like extending the participants' base settlement and providing settlement services to corporate clients of the banks.
- RTGS implementation provides the capability of connecting with various other regional / international payment systems for foreign exchange, government bonds, and private equity settlements.
- RTGS implementation also provides the capability of integration with Stock Exchanges, Central Depository Company, National Commodities Exchange, Central Board of Revenue, etc. thus enabling the various stakeholders to minimize settlement risks in their systems.

Electronic Clearing House Starts Operation in Bangladesh

Bangladesh Bank

Bangladesh Bank is going to start its Electronic Clearing House operation by the end of this year with technical and financial assistance from DFID, UK. Bangladesh Bank has completed installation of a modern data center at its head office complex at Motijheel and a disaster recovery back up at Mirpur in the capital Dhaka. All hardware and software systems have been installed at these sites and are now ready for user acceptance and pilot operation. Bangladesh Bank is scheduled to start its User Acceptance Test (UAT) and pilot from the first week of October this year.

Initially, the Clearing House will start its operation with more than 1,050 branches of 49 participating banks in the capital Dhaka region and gradually expand its operation to other regions of the country to include about 7,000 branches of 49 participant banks. It is expected that the honorable Prime Minister will formally inaugurate the live operation of the Clearing House beginning next year. Bangladesh Automated Clearing House (BACH), the Electronic Clearing House, has two components - the Automated Cheque Processing System and the Electronic Funds Transfer.

Bangladesh Automated Cheque Processing Systems (BACPS), the electronic cheque processing of paper items, will use Cheque Imaging and Truncation (CIT) technology. BACPS participants, i.e., commercial banks, financial institutions, money & capital market agencies, related and related government offices have been sensitized. All the clearing instruments, i.e. cheques, drafts, payment orders, dividend and refund warrants, etc. have been standardized. The new cheques will contain a Magnetic Ink Character Recognition (MICR) line which

includes information on the amount, transaction code, clients account information, routing number and the cheque leaf's serial number. Especially schemed routing numbers have been assigned to the bank branches for easy identification of origin and destination of instruments. The system will support both intra-regional and inter-regional clearings and is based on a centralized processing centre located in Dhaka and in designated clearing regions. The proposed processes and systems will conform to international best practices and will also represent the most cost effective solution for cheque processing.



Bangladesh Electronic Funds Transfer Network (BEFTN) is the processing and delivery centre for the distribution and settlement of electronic debit and credit transactions among its participants. 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 credit transactions and gradually progress to debit transactions. This will dramatically bring down the operational cost, reduce risk and will increase the efficiency of the payments process.

In order to give legal and regulatory backing to the electronic exchange of images of paper items and electronic transfer of funds, Bangladesh Bank has approved and assigned the Bangladesh Payment and Settlement Systems Regulation 2009. In addition, Bangladesh Bank is now drafting the Rules & Procedures for Automated Cheque Processing and Electronic Clearing House. Moreover, for providing comprehensive legal

backing to the operation of the Electronic Clearing House, Bangladesh Bank is also examining to bring in amendments in certain provisions of the existing Negotiable Instruments Act, 1881 and Bankers Book of Evidence Act, 1891.

Bangladesh Bank has taken appropriate initiatives to enhance public awareness on the new system. As a first step towards modernizing country's payment systems, the introduction of the Electronic Clearing House in Bangladesh will add value in the economy and is expected to improve the financial services framework of the country.

Access to Finance and Payment Systems in Maldives

Maldives Monetary Authority

Payment Systems development in Maldives will be a catalyst for the provision of "access to finance" in Maldives as a national inter-operable payments system is being implemented to facilitate access to financial services through mobile phones.

The Mobile Phone Banking Project seeks to provide "financial inclusion" to the "unbanked" in the hardest to reach geographical locations across the country. In addition, the project will contribute to a significant development of the banking and payment infrastructure of Maldives.

islands, perpetuates poverty and vulnerability. The "banked population" in the country (excluding the Capital Island, Male) is estimated to be about 30%. The challenge is therefore to use technology to overcome these barriers and hence provide access to banking for everyone throughout the country.

"Banking through Mobile Phones"

The Mobile Phone Banking Service will allow mobile phone users to open a basic bank account "over the air" in any of the participating banks, and will allow operation of these mobile phone accounts via the mobile phone. The mobile phone accounts can be used to receive and transfer funds and to make payments between mobile phone accounts. This system will be supported by a network of local agents throughout the country who will provide the cash-in and cash-out functions to customers.

Implementation work

This is a Maldives Monetary Authority led project to overcome barriers to access to finance and to develop the financial sector of the country by development of the payment infrastructure of the country.

All Mobile Network Operators in the Maldives will be participating in this project to implement, for the first time in the world, an "interoperable" multi-bank, multi-operator payment system.

Procurement work to acquire the systems has now been completed, and implementation is set to begin in September 2009.



The main elements of the technical solution will be the Mobile Payment System, a Real Time Gross Settlement system, an image enabled Automated Clearing House system, and an EFTPOS / ATM Switching system.

"Access to Finance" – The Maldivian context

Due to the geographical structure of the country with the population living on some 199 islands and two-thirds of the population living on far flung islands in small communities, it has not been cost effective for any bank to open branches on every island. As a result, access to banking services and bank credit on these islands is generally very limited. The lack of access to basic financial services, especially in the

Service Providers of Payment Cards Regulations No. 01 of 2009

Central Bank of Sri Lanka

The global payment industry has undergone significant change as a result of new technological innovations, changes in consumer preferences and diversification of financial services. New electronic payment methods have been introduced and means of making electronic payments have become increasingly available for every day transactions. Payment cards have become widely accepted means of electronic payments for both local and international transactions. They are a more convenient, secure and cost effective method of effecting payments than using currency and cheques.

In the recent past, usage of payment cards in settling day to day transactions in Sri Lanka has increased importance due to the growing preference of customers to use convenient payment instruments. Although the value and the volume of card based transactions in Sri Lanka are still relatively low when compared with other payment instruments, it has been observed that the value and the volume of transactions carried out through card based payment instruments have shown a significant increase in the last few years.

Even though the popularity of card based payment instruments has increased over the years, there were no legal provisions to protect the rights of card holders and to regulate the payment card businesses. The Payment and Settlement Systems Act No 28 of 2005 (PSSA) has entrusted the CBSL with the responsibility of ensuring the soundness and stability of the national payment system and the financial system, in order to guarantee the legal certainty of payments and reduce risks. In order to implement the provisions of the PSSA, effectively and efficiently, the National Payment Council (NPC) identified and recommended the necessity of issuing regulations/directions on card based payment instruments to safeguard the stability of the national payment system. Accordingly, the CBSL prepared the Service Providers of Payment Cards Regulations No. 01 of 2009, which is effective from 30 July 2009. The main objective of the regulation is to ensure that all service providers of payment cards observe international standards and best practices and thereby reduce the risks of credit card frauds and increase public confidence in card based electronic payments.

Under the Regulation, the CBSL will function as the Supervisory Authority, with required powers to regulate and supervise service providers of payment cards. Accordingly, the eligible institutions that are able to carry out card based payment services are licensed commercial banks, licensed specialized banks, registered finance companies and public companies having an unimpaired capital of over Rs. 75 million. Eligible institutions that are engaged in or expected to commence payment card business are required to register

with the CBSL. To implement, administer and enforce the provisions of the regulation efficiently, the CBSL is empowered to issue circulars, directions, guidelines and operating instructions in this regard. In addition, the CBSL has authority to monitor all new products relating to the payment card industry before they are introduced to the market to ensure that such products are consistent with the provisions in this regulation. Accordingly, new payment instruments such as e-money and e-wallet will also be regulated as stored value card payments under this regulation.

The CBSL is vested with the powers to carry out on-site and off-site inspection and supervision of service providers of payment cards under the regulation. If it is revealed during supervision that any service provider is unable to carry on business or that the continuance in business of a service provider is likely to affect financial system stability, the CBSL can direct such service provider to suspend its business relating to payment cards and take corrective measures to safeguard the card holders and the payment card industry in Sri Lanka, and any service provider who fails to comply with the regulation will be subject to a non compliance charge.

It is expected that these regulations will bring several benefits to service providers of card based payments and users of such services, in particular, and the economy, as a whole. The supervision by the CBSL would minimize potential losses for service providers since they are permitted only to operate within a given regulatory framework. The efficiency of their businesses would also increase by following international best practices. Card holders will also benefit by the minimizing of risks of frauds and financial losses. Further, public confidence would be enhanced due to the intervention of the CBSL, thereby increasing the use of such facilities, which would help to reduce transaction costs.

These regulations would increase the efficiency of the payment card business in Sri Lanka, paving the way for an environment where both service providers and customers are able to manage liquidity requirements in an efficient manner.

LANKASIGN – Certification Service Provider for the Financial Sector Established in Sri Lanka

Central Bank of Sri Lanka

The payment industry in Sri Lanka is evolving towards greater efficiencies and customer centricities, which has resulted in high reliance on advanced technology. The use of the Internet and electronic transactions has evolved rapidly in Sri Lanka, facilitating greater customer convenience and attracting new customers, irrespective of their demographics. This is evidenced by the high use of SLIPS (Sri Lanka Interbank Payment System) and other electronic payment systems and the growth in the use of Internet Banking.

Although advance technology brings about many advantages to financial institutions and its customers, it also brings in greater risks of information security and electronic fraud. Therefore as the use of electronic payments (e-payments) increases, the need for advanced IT security infrastructure becomes critical in order to minimize the risks associated with information security and unauthorized access.

Authentication is a critical issue for users of electronic commerce. Banks must have confidence in the authenticity and the integrity of an electronic transaction received from another bank. This can be achieved through the use of Digital Signatures. Digital Signatures are aimed at achieving a higher level of trust where written signatures are not possible. Digital signing helps the recipient of the electronic transaction to know with certainty that it was originated by the party who claims who they are and that no changes have been made after the transaction has been signed.

Recognizing this need, the Central Bank of Sri Lanka (CBSL) requested LankaClear (Pvt) Ltd (LCPL), which operates retail clearing systems such as the Cheque Imaging and Trucation System (CITS) and the Interbank Payment System, to be the financial sector Certification Service Provider (CSP).

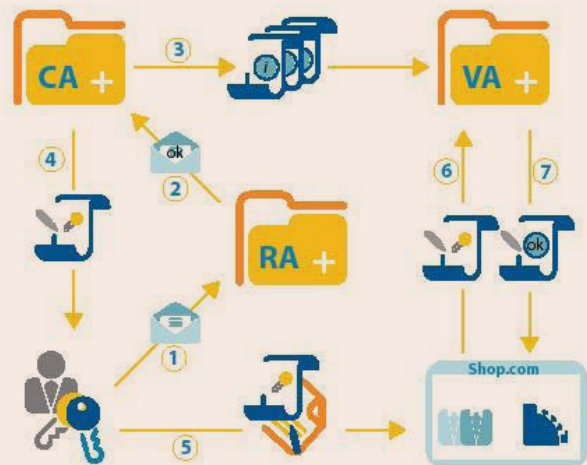
LCPL launched Sri Lanka's first Certificate Authority under the brand name LANKASIGN in accordance with the Electronic Transaction Act, No.19 of 2006, on 22 May 2009. A CSP is an authority on a network that issues and manages security credentials and public keys for message signing and encryption. As part of a public key infrastructure (PKI), a CSP checks with a Registration Authority (RA) to verify information provided by the requestor of a Digital Certificate. If the RA verifies the requestor's information, the CA can then issue a Digital Certificate that can be used for the purpose of signing and encrypting electronic transactions.

LANKASIGN in its first phase has started providing digital certificates to the participants in the Common Payment Switch (CPS – Online, real-time electronic fund transfer system) and the planned enhancements for the (CITS) direct connectivity, where the CA and Public Key Infrastructure (PKI) will be made available on LCPL's Virtual Private Network (VPN). In the second phase, LANKASIGN will provide digital certificates for all financial sector enterprise applications and end users and the facility will be made available through the

public network. This will be of great value to the financial sector in Sri Lanka as the digital certificates of LANKASIGN will save the banks much valuable foreign exchange, which they currently incur in procuring Certificates from foreign CAs at a high cost.

LANKASIGN is not only a major achievement for the ICT industry in Sri Lanka, but will greatly encourage more institutions in the financial sector to adopt cost effective digital certificate based technology for greater information security for their transactions.

Certification Service Provider Architecture



1. User requests for a digital Certificate.
2. Registration Authority (RA) verifies user's identity and sends the request to Certificate Authority (CA) to generate the Digital Certificate.
3. CA publishes the user's public key at the Verification Authority (VA).
4. CA provides the user with a Digital Certificate (i.e. public key, private key, other details, etc.).
5. User signs a document using his private key.
6. Vendor verifies with the VA the validity of the Digital Signature.
7. VA confirms Digital Signature.

Electronic Fund Transfer and Clearing System (EFTCS) In Bhutan

Royal Monetary Authority of Bhutan

The Royal Monetary Authority of Bhutan (RMA), with partial financial assistance from the World Bank and Technical Assistance from the Reserve Bank of India (RBI), has initiated the implementation of the Electronic Fund Transfer and Clearing System (EFTCS) Project which will go a long way in strengthening the Payments System in Bhutan.

Under the proposed EFTCS, the transfer of money/funds from one account to another account shall take place electronically. Necessary arrangements, such as rules and regulations, documentation, and authorization shall be put in place to enhance the safety and efficiency of the Payments System. Moreover, with the introduction of the EFTCS, inconveniences and delays associated with cash and other paper-based transfer of funds, including cheques and drafts shall be minimized, since participants will be able to settle their transactions in an efficient and expeditious manner. Nevertheless, cheques shall continue to remain a mode of payment, although it is expected that the volume of cheques used will be reduced once electronic funds transfers pick up.

The EFTCS Project is concentrated largely on three types of Payment Systems:

1. National Electronic Fund Transfer (NEFT)

The National Electronic Funds Transfer (NEFT) system is a nationwide funds transfer system to facilitate the individual transfer of funds from one bank branch to any branch of other participating commercial banks in Bhutan. It is a mode of electronic funds transfer from one bank account to another bank account using the services of a Clearing House.

2. Bulk Electronic Fund Transfer for Debit Transactions (BEFT Debit)

Under the Bulk Electronic Fund Transfer for debit transactions, the account of an institution maintained at the bank called sponsor bank shall be credited by debiting funds from the accounts of numerous customers.

This is a scheme under which an account holder with a bank can authorize an institution (called an EFTCS user) to recover an amount at a prescribed frequency by raising a debit in his account. The EFTCS user has to collect an authorization which is called an EFTCS mandate in order to raise such debits. These mandates in turn have to be endorsed by the bank branch maintaining the account.

Companies/organizations can initiate the transactions after registering themselves with the Clearing House. Types of transactions proposed to be covered under the BEFT (Debit) include payments of utility bills, loan repayments, insurance premiums etc.

3. Bulk Electronic Fund Transfer for Credit Transactions (BEFT Credit)

Under the Bulk Electronic Fund Transfer for Credit transactions, the accounts of individuals maintained with commercial banks shall be credited with amounts payable to them by the company/organization towards payments including dividends, salaries, pensions etc. In other words, the BEFT (Credit) shall be used to disburse credit to a large number of beneficiaries by raising a single debit to an account maintained at the bank called sponsor bank of the concerned company/organization.

Companies/organizations can initiate the transactions after registering themselves with the Clearing House. BEFT users will also have to obtain consent regarding the account particulars of the beneficiary to participate in the BEFT clearings. Types of transactions proposed to be covered under the BEFT (Credit), include payment of salaries, dividends, pensions etc.

RBI has extended its tremendous goodwill and assistance for the operationalisation of the above Payment Systems in Bhutan. Under Technical Assistance from the RBI, in addition to providing the necessary software for these Payment Systems, which have been successfully implemented and time tested in India, the RBI will depute a team of senior officials to customize, install, and train the officials of the RMA to operationalise the system in Bhutan.

The EFTCS Project, initiated by the RMA with partial funding from the World Bank and Technical Assistance from RBI, is currently in the implementation phase. The Project is expected to be fully operational in 2010.