

Security Issues and Risk Mitigation Measures Related to Card Not Present Transaction

By Reserve Bank of India

Reserve Bank of India has issued a directive making it mandatory for banks to put in place additional authentication/validation based on information not visible on the cards for all Interactive Voice Response (IVR) transactions. From January 31, 2011 no IVR transactions are permitted unless such transactions comply with the additional factor authentication requirement.

- Banks have also been advised to put in place a system of online alerts for all types of transactions irrespective of the amount, involving usage of cards at various channels. This measure is expected to encourage further usage of cards at various delivery channels. Banks have been mandated to implement this measure latest by June 30, 2011. These instructions supersede the earlier instructions mandating online alerts to the cardholders for all Card Not present (CNP) transactions for the value of Rs.5000/- and above.
 - A Working Group on security issues and risk mitigation measures related to Card Present transactions has been formed with representation from Public/Private/Foreign banks, card companies, National Payments Corporation of India and the Reserve Bank of India to suggest measures for addressing the security and risk mitigation measures for Card present transactions which constitute a major portion of the transactions using cards (ATMs and POS) and an action plan for implementation of the same.
- (ii) permit banks to issue semi-closed prepaid instruments through the agents in addition to their business correspondents; and
 - (iii) permit the issue of co-branded prepaid payment instruments.
- Additionally guidelines have been set out for:
- (i) gift prepaid instruments;
 - (ii) prepaid instruments issued by banks to Government organisations and other financial institutions for onward issuance to beneficiaries/customers; and
 - (iii) prepaid instruments by banks issued to beneficiaries under Money Transfer Service Scheme (MTSS) for loading of cross border inward remittances received by them.

Paper Based Clearing System

A new package styled 'Express Cheque Clearing has been developed in co-ordination with State Bank of India (SBI), a commercial bank. The roll-out of the Express Cheque Clearing System will facilitate implementation of Speed Clearing¹) at all the clearing locations in the country. The package would be rolled-out at all the clearing locations, including the back-up banks identified as part of the business continuity plans at MICR and non-MICR centres. National Payments Corporation of India (NPCI), the umbrella retail organisation has been vested with the responsibility for the roll-out, in

Prepaid Payment Instruments Guidelines

The Reserve Bank of India had issued 'Policy Guidelines for issuance and operation of Prepaid Payment Instruments in India' in April 2009. These guidelines issued earlier have been amended to:

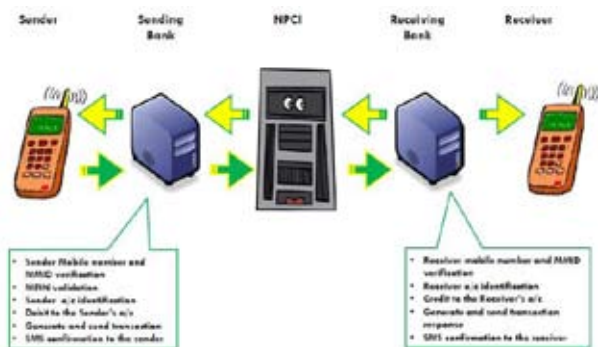
- (i) extend the use of semi-closed prepaid instruments intended for payment of utility bills/ essential services, for purchase of air/train travel tickets;

¹ Speed Clearing refers to collection of outstation cheques through the local clearing. It facilitates collection of cheques drawn on outstation core-banking-enabled branches of banks, if they have a net-worked branch locally

co-ordination with SBI, and the other stakeholders viz. various clearing house managing banks and member banks of clearing houses.

Inter-bank Mobile Payment Services (IMPS)

The Inter-bank Mobile Payment Services (IMPS) public launch NPCI took place on November 22, 2010. IMPS offers an instant, 24X7, interbank electronic fund transfer service through mobile phones. IMPS facilitates customers to use mobile instruments as a channel for accessing their bank accounts and putting through interbank fund transfers in a secured manner with immediate confirmation. The eligible criteria for the banks who can participate in IMPS is that:



- a Bank should be a member of National Financial Switch (NFS) driven by NPCI; and
- a Bank should have approval from the RBI for the Mobile Banking Service.

Oversight of payment systems

(i) Assessment of Retail payment systems

For assessment of Retail Payment Systems (RPS), an assessment template for carrying out oversight of retail payment systems has been prepared. The template is based on the seven core principles for systemically important payment systems (SIPS) which are found relevant to the RPS. The template is general in nature and not specific to a particular type of payment system. These would be used for self-assessment by the payment system operators. Accordingly, the Regional Offices of DPSS have been asked to circulate the template to the authorised entities operating under their respective jurisdictions for carrying out the self assessment. To aid the authorised entities in this process a detailed Guidance note has also been appended to the Assessment template. The details gathered through the self-assessment exercise would be used for on-site inspection if so required. To this effect a detailed Guidance Note has been prepared for the Assessor.

(ii) Submission of Audit report on Intermediaries accounts held by banks

The use of electronic/online payment modes for payments to merchants for goods and services like bill payments, online shopping etc. has been gaining popularity in the country. With a view to safeguard the interests of the customers and to ensure that the payments made by them using electronic/online payment modes are duly accounted for by the intermediaries receiving such payments and remitted to the accounts of the merchants who have supplied the goods and services without undue delay, the Reserve Bank of India issued directives for the safe and orderly conduct of these transactions.

As part of oversight, banks were directed to send a quarterly certificate from the concurrent auditor, on the operations of the intermediaries' account being in accordance with directions issued by Reserve Bank by the 15th of the following month. Banks were also directed to certify that the said quarterly certificate includes all the intermediaries' account maintained with the bank.

(iii) Submission of system audit reports

The authorized entities have been directed to get a System Audit conducted by a Certified Information System Auditor (CISA) who is registered with Information Systems Audit and Control Association (ISACA). The scope of the System Audit includes evaluation of the hardware structure, operating systems and critical applications, security and controls in place, including access controls on key applications, disaster recovery plans, training of personnel managing systems and applications, documentation, etc. The authorised entities have been advised to furnish their respective system audit reports on an annual basis to the Reserve Bank of India within 2 months of their Annual closing.

Visit by officials of Royal Monetary Authority, Bhutan

A team of officials from Royal Monetary Authority (RMA) Bhutan visited the Department between March 07, 2011 and March 10, 2011 for guidance in expediting the setting up of financial switch at Bhutan and connecting the same to our National Financial Switch (NFS), as a part of the Technical Assistance for setting up of the Payment systems at Bhutan. The delegates visited NPCI and Punjab National Bank (the Settlement Bank for transactions between India and Bhutan through NFS) also in this connection.

Payment Systems Modernization in Bangladesh: Achievements and Strategies

By Bangladesh Bank

All quiet on the “Manual Clearing House” from October 7, 2010. Officials from commercial banks are not coming with bags bulked with cheques and other instruments for clearing four times a day. The floor of the “Manual Clearing House” is not chaotic with calls, counts, busy tables and exchange of the instruments. Only the images and information of the clearing instruments come to the new automated cheque processing system for clearing. People don’t have to wait for three days for local clearing and weeks for inter-regional clearing. It is now either ‘The Same Day’ or ‘The Next Day’ business. The full-fledged operation of electronic funds transfer will further give a leap towards efficient payment systems.

It all began in October 2006 - when Government of the Peoples Republic of Bangladesh and Department for International Development (DFID), UK formed Remittance and Payments Partnership (RPP) explicit goal of modernizing country’s payment and settlement system with ends and means of faster and safer delivery of remittances to the beneficiaries. Considering these critical importance of having a modern payment and settlement system in Bangladesh, Bangladesh Bank (BB) took the challenge to build a modern payment and settlement system from the scratch - starting with the implementation of Bangladesh Automated Clearing House (BACH) - the maiden step towards modernizing the National Payment System infrastructure of Bangladesh

Bangladesh Automated Clearing House (BACH), the first ever automated national payment systems platform, has two components - Bangladesh Automated Cheque Processing Systems (BACPS) and the Bangladesh Electronic Funds Transfer Network (BEFTN). BACPS started its live operation on 07 October 2010 and BEFTN went live on 28 February 2011.

The implementation of these two systems were not easy tasks. Along with the task of preparing a knowledgeable team for a structured Payment Systems Division (PSD), a world class Data Center (DC) and Disaster Recovery Site (DRS) have been set up creating a Virtual Private Network (VPN) with the participants under the supervision of international experts on Payment and Settlement Systems.

Works crucial to the successful implementation of BACPS were - selecting an appropriate topology for country wide cheque clearing, formulation of unique routing number and



MICR line composition, design of MICR encoded uni-sized cheques with special features to fight frauds, creating awareness among the participants of the clearing house and users of the cheque, make-ready the government organizations for participation, guiding the participants to prepare their own system and test against centralized system, testing and correcting the Participating Bank Module (PBM), prepare the centralized cheque processing systems through Systems Integration Test, User Acceptance Tests and Live Day Simulations, guiding the participants to prepare their own system, etc. It was a tough-task made-easy by the PSD team removing all barriers from technological to psychological. Currently the system clears approximately 80,000 of regular and 3000 high-value cheques which are about 85 percent of the total cheques processed through the clearing system and all of the commercial banks are participating in the Automated Cheque Processing System. Sylhet and Chittagong clearing houses have been connected with the Dhaka clearing House on January 20 and February 03 2011 respectively. Gradually it will connect Rajshahi, Bogra, Rangpur, Khulna, and Barishal regional centers of Bangladesh Bank.

The stable BACPS system laid the even-easy platform to start BEFTN operation on 28 February 2011. Now 40 banks out of 48 are participating in the EFT. Once popularized, EFT will dramatically bring down the operational cost, reduce risk and will also increase the efficiency of the payments process. Now the number of cheques for clearing is increasing as the settlement time has been reduced. But it is expected that the cheque number will be reduced after EFT start its full-fledged operation.

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 Bangladesh Bank. The BACPS system supports both intra-regional and inter-regional clearings and is based on a centralized processing centre located in Dhaka which has reduced the clearing cycle from t+2 to t+1 for both local and inter-regional regular value cheques. Currently

it takes t+0 for the clearance of high-value cheques for the Dhaka clearing region, was previously limited which only to the city center of Motijheel commercial area.

Apart from physical infrastructure for establishment of the BACH, formulation of required specifications and regulations to remove legal impediments for flawless operation of the same deemed mandatory. Hence we published “Bangladesh Payment and Settlement Systems Regulations (BPSSR), 2009” to avoid regulatory pitfalls and ambiguities of the new technology driven payment systems and to accommodate internationally accepted best practices. Bangladesh Automated Cheque Processing Systems Operating Rules and Procedures and Bangladesh Electronic Funds transfer Network Operating Rules were also published to be more operation-specific. We are thankful to the member-countries of SAARC Payments Council (SPC) for their valuable help and suggestions for governing the physical infrastructure as well as legal framework.

Another important milestone for modernizing the payment systems was the implementation of mobile and internet based payment transactions. So far we have given permission to 10 commercial banks for offering of mobile technology based services out of which 6 banks have already started their operation. The operations mainly cover the services (in broad category) like - disbursement of inward remittances, cash receive and disbursement, person to business payment (i.e. bill payment), business to person payment (i.e. salary payment), government to person payment (i.e. elderly allowances, freedom fighter allowances, etc.). We also approved sale of railway tickets and Cricket match-tickets in alliance with mobile operators as benchmark of starting m-commerce in the country. In order to facilitate such transactions, a “Guideline for Mobile Technology based Financial Transactions” has already been formulated.

Bangladesh bank has issued a circular for starting e-commerce activities like online utility bill payment, online funds transfer between two accounts in the same bank, payment via internet through credit card (in local currency), etc. Two banks have already issued card for local internet based payments.

In order to create a convergence among interbank electronic payments originating from different delivery channels e.g. Automated Teller Machines (ATM), Point of Sales (POS), Internet, Mobile Applications, etc.; Bangladesh Bank has taken initiative to implement the “National Payment Switch (NPS)”. The main objective of NPS is to create a common platform among the existing shared switches already built-up by different private sector operators. NPS will facilitate the expansion of the card based payment networks substantially and promote e-commerce throughout the country. Online payment of Government dues, using cards and account number information through Internet will greatly enhance using NPS. Payment Systems Division (PSD), Department of Currency Management and Payment Systems (DCMPS), BB will implement this with the assistance of World Bank and International Finance Corporation-Bangladesh Investment Climate Fund (IFC-BICF). We are also looking towards implementing RTGS by the end of 2014.

Development of payment systems is now a top-priority for the transformational economy of Bangladesh. ICT-intensive Payment and Settlement Systems have emerged as most important catalyst for transformation of business, society, and government in the globalizing world. Already financial market is ploughing the dynamics of the already implemented systems. Other systems, being installed, will greatly enhance the market performance of the country’s financial market. Now Bangladesh is very much within the process of building up a world-standard technology-driven modern payment & settlement system.

Settlement of 3rd Party Fund Transfers Through PRISM System

By State Bank of Pakistan

One of the recent developments in payment and settlement system in Pakistan is the introduction of settlement of 3rd party fund transfers facility through PRISM system (RTGS) by using MT 103 for corporate sector and retail purpose. Before this development, only interbank transactions i.e. MT 202 were settled in PRISM system. In order to increase the coverage of electronic payment systems as a first step, it is expected that extending such a facility through PRISM would not only enhance efficient and timely fund transfers by banks but would also result in cost reduction for such transfers for the customers of banks.



Recent PSS Developments in Bhutan

By Royal Monetary Authority of Bhutan

With the objective of providing fast, secure and efficient payment services to the public, the Royal Monetary Authority of Bhutan (RMA) has taken up various initiatives in developing the payment systems in Bhutan.

The following are some of the major initiatives taken by RMA for the development of payment systems:

1. Electronic Funds Transfer and Clearing System (EFTCS)

The EFTCS Project consisting of National Electronic Clearing System for credits (NECS Credit), National Electronic Clearing System for debits (NECS Debit) and the National Electronic Funds Transfer System (NEFT) has been implemented with Technical Assistance from Reserve Bank of India.

The EFTCS facilitates the customers to transfer the funds amongst the commercial banks. The customers can transfer the funds from an account maintained with 'Bank A' to another account maintained with 'Bank B', 'Bank C' or 'Bank D'. Under the Electronic Funds Transfer and Clearing System, the transfer of money/funds from one account to another account takes place electronically. With the introduction of this electronic mode of transfer of funds, the inconveniences and delays associated with cash and other paper based transfer of funds such as cheques and drafts has been avoided.

National Electronic Clearing System (Credit)

Under NECS Credit, the accounts of individuals maintained with commercial banks shall be credited with amounts receivable by them from the company/organization on account of dividends, salaries, pensions etc. In other words, NECS Credit is used for affording credit to a large number of beneficiaries by raising a single debit to an account of the concerned company/organization.

NECS Credit system has been implemented from June 2010. Initially, the system started with the disbursement of salaries. However, over time, additional transactions such as payment of dividends, pensions, insurance premiums, taxes, loan repayments etc. have also been included under NECS Credit. Similarly, the number of user institutions using the system has also increased many folds.

National Electronic Clearing System (Debit)

Under NECS Debit, the account of an institution shall be credited by debiting money from the accounts of many customers. In other words, NECS Debit is used for raising multiple debits from a number of accounts of customers for crediting the account of a particular institution. It is a scheme under which an account holder with a bank can authorize the user institution to recover an amount by raising a debit in his account. The user institution has to collect an authorization from the customer for raising such debit. Such authorization

has to be endorsed by the bank maintaining the account of the customer.

NECS Debit has been implemented from December 2010. This system has been used for payment of school fees. NECS Debit shall also be extended for payment of utility bills, subscription to initial public offers for purchase of shares of companies, loan repayments, etc.

National Electronic Funds Transfer

The National Electronic Funds Transfer (NEFT) system is a nationwide funds transfer system to facilitate transfer of funds from one bank branch to any other bank branch. NEFT facilitates transfer of funds from one individual to another individual, one institution to another institution, one institution to one individual. In other words, under NEFT, funds can be transferred only between two parties.



1. Financial Switch

The RMA is also in the process of implementing the Financial Switch in Bhutan.

The following facilities shall be available under the Financial Switch:

i. Domestic:

- Interoperability of ATMs of banks.
- Interoperability of Point of Sales (POS) of banks.

The Financial Switch of RMA shall facilitate interoperability of ATMs and the POS of all the commercial banks in Bhutan. It will facilitate bank customers to withdraw money from the ATMs of other banks. Further, the Financial Switch shall also facilitate banks customers to use the POS terminals of other banks for making payments for purchase of goods at the shops.

ii. Transactions with India:

The Financial Switch of the RMA shall be connected with the National Financial Switch of the National Payments Corporation of India (NPCI) under the Technical Assistance from the Reserve Bank of India.



Such linking of the Financial Switches of the two countries shall facilitate the people of Bhutan and India to use ATM Cards issued by their banks in each other's countries. Upon

making such arrangement, the public do not have to carry physical cash while visiting either country.

The software as well as hardware required for the Financial Switch have already been purchased and the Financial Switch is planned to be operational during 2011.



Mobile Payments Guidelines in Sri Lanka

By Central Bank of Sri Lanka

In line with the global trends in the payment and settlement systems evolution led by advancement in information technology and consumer preferences, payments landscape in Sri Lanka has also been moving continuously towards a more electronic based payment arena. Accordingly, commercial banks in Sri Lanka have been gradually offering electronic payment mechanisms since more than two decades, starting from providing basic facility i.e. information on accounts to effecting fund transfers of customer accounts.

Having considered the recent developments in the field of payment systems, interest of bank and non-bank service providers in providing electronic payment mechanisms and the requirement of providing a secure and safe environment for innovative payment instruments with the diversified economic activities, various steps are being taken by the Central Bank of Sri Lanka (CBSL) in order to regularize electronic payment methods such as policy making, licensing, monitoring and supervision with the collaboration of the other stakeholder who are engaged in the payments and settlement related activities. Accordingly, in 2009 the CBSL took initiatives to issue 'Service Providers of Payment Cards Regulation No 01 of 2009' (Regulations) which covers almost all the electronic fund transfer mechanisms i.e. credit cards, debit cards, store value cards and phone based payment means.

As a result of the expansion of the outreach of mobile phone network in the country, phone based payment applications are explored by the financial

industry as a better option to provide electronic payment services to the nation. Taking into consideration the importance of having introduced the precautions that need to be taken particularly on the security of electronic fund transfers, the CBSL has taken a decision to issue guidelines for the operations of fund transfer mechanisms that come under the Regulations. Consequently, in the first quarter of the year 2011, CBSL issued guidelines for phone based payment services to be adopted by bank and non-bank service providers engaged in phone based payment services.



National payment council (NPC), represented by stakeholders of the payment industry which was set up to have a national dialogue on PSS issues and to work on a time targeted action plan to reform PSS in Sri Lanka, identified and recommended the necessity of issuing these guidelines with the objective of promote safety and effectiveness of phone based payment services and thereby enhancing the confidence of such services and safeguard the stability of the national payment system.

Salient feature of these guidelines is that there are two separate sets of guidelines for bank and non bank service providers namely;

1. Mobile payments guidelines No. 1 of 2011 for bank led mobile payment service; and
2. Mobile payments guidelines No. 2 custodian account based mobile Payment Service.

Under the bank led mobile payment services, License Commercial Banks (LCB) who have obtained licences from the CBSL can operate customer account based mobile payment systems, which can be offered only to their customers (accounts holders). Under this system banks are allowed to offer three types of mobile services facilities:

I. Basic Type:

This facilitates the customer to obtain information on their accounts, transaction records, payment orders, which do not relate to fund transfers.

II. Standard Type:

It facilitates the customers to initiate fund transfers, payments, stop payments, in addition to the Basic type services. Own account fund transfers, third party payments, utility bill and any regular payments can be made under this service, on the basis of instructions transmitted through mobile phones.

III. Extended Type:

LCB are allowed to operate the mobile payment services through its agent(s). It allows the account holders to deposit/withdraw cash through agents appointed by the respective banks in addition to the basic type and standard type services.

Custodian account based mobile payment services shall be operated only by non-bank service providers licensed under the Regulations to function as service providers of payment cards. Under the custodian account based system, licensed service providers may issue e-money by accepting physical money from customers/merchants. On the other hand, licensed service providers operating custodian account based mobile payment systems may convert e-money into physical money for e-money holders (cash-outs) on their request, directly or through appointed merchants. Based on the transactions made by customers

and merchants, it is mandatory that the e-money accounts of them shall be updated on real-time basis. Licensed service providers operating custodian account based mobile payment systems shall operate a custodian account/s with Licensed Commercial Banks (LCB)/s and shall maintain the cumulative sum collected from all e-money account holders in the custodian account/s at all times.

Both of the guidelines provide the terms and conditions to be followed by service providers with regard to registration of customers, technology and information security standards, customer protection and grievance and redress mechanism along with the regulatory and supervisory provisions. The CBSL has given much concern relating to the customer protection in preparing the guidelines for the non-bank service providers considering the risk involved in such payments models.

Under the custodian account based mobile payment model extensive responsibilities have been laid down on the custodian bank in order to mitigate the risks associated with such systems. In addition, as a measure to protect both the service providers and users of the system, following actions are not allowed to carry on under the mobile payment services:

- (a) grant any form of credit to the e-money account holder;
- (b) pay interest or profit on the e-money balances;
- (c) issue e-money at any discount i.e. provide e-money that would add monetary value of e-money; and
- (d) any other facility that exceeds the monetary value of the deposit made by the e-money holder.



With the financial integration as well as rapid development of payment models, it is required to maintain inter-operability among mobile payment services operators in order to have the full benefit of the mechanism. As such, the long term goal of the CBSL is to ensure the ability to effect fund transfers from anywhere at any time from an account in one bank to another account in the same or a different bank, on real time basis irrespective of the mobile network operator that is being used by the customer. Therefore the guidelines emphasized the importance of having such inter-operability of the mobile payments System and LCBs have been instructed to note this objective when developing solutions or entering into agreements with mobile payment solution providers.

Payment Systems Development in Maldives

Maldives Monetary Authority

Maldives Monetary Authority (MMA) is in the process of introducing the following systems to develop its national payment system and promoting financial inclusion in the country, Maldives Real Time Gross Settlement (MRTGS) System was launched on April 10, 2011 which is the first development milestone under the project. This system settles large value and urgent interbank transactions in real time on gross basis thus reducing the risk in payment system and allowing banks to manage their liquidity effectively.

MMA is expecting to launch the Automated Clearing House in the near future which is a session based small value bulk payment clearing system for cheques, direct debits and direct credits. In addition, this system will introduce cheque truncation in the Maldives reducing the processing time of these transactions. Further both MRTGS (currently running) and ACH enable banks to migrate to straight through processing (STP) which will reduce manual intervention and increase efficiency especially for larger banks. For corporate and businesses, the ACH provides an efficient method for collection and disbursement of payment. In the long run, MMA anticipates a decline in the usage of paper instruments due to the introduction of these systems.

Mobile Payment System (MPS) known as “Keesaa” - The financial inclusion component branded “Keesaa” 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 accounts via the mobile phone handset. These accounts can be used to receive salary, pensions and other funds and to send money to other accounts or make payments to merchants and utilities. This system will be supported by a network of agents throughout the country who will provide the cash-in and cash-out services to customers.

Electronic Funds Transfer ATM & POS Switch -Under the Project, MMA plans to establish a national ATM and POS interoperable Switch which will establish interoperability of all card transactions in the Maldives by connecting to all banks card systems to the Switch. The Switch will also allow banks to provide services to their customers using a widespread of ATM and POS infrastructure in the country at lower cost.

MMA plans to launch both these systems during 2011.

8th Meeting of the SAARC Payments Council 15th November 2010 at Bangalore, India

