

17th SAARC Payment Council Meeting



The 17th Meeting of the SAARC Payments Council (SPC) was held on Thursday 3rd December 2015 at Cox's Bazar, Bangladesh under the Chairmanship of Mr. Saeed Ahmad, Deputy Governor, State Bank of Pakistan. The meeting was attended by all member countries except Maldives.

The Chairman SPC welcomed all delegates to the meeting. He appreciated efforts of Bangladesh Bank and SPI Secretariat for arranging the event and highlighted the need to understand payments related new business models, role of emerging non-banks and conduct assessment of SAARC payment systems against Principles of Financial Market Infrastructures. The Chair also emphasized that regulators should strengthen their oversight capabilities and share experiences with other members, since new entrants and commercial service providers are bringing new risks and challenges. He finally mentioned the need of standardization to achieve harmonization of PSS in the SAARC region.

Post meeting a workshop on Cyber Security on Payment Systems was organised. Mr. Peter Andrew Gallagher from Reserve Bank of Australia and Mr. Bharat Panchal from National Payments Corporation of India (NPCI) were the speakers at the workshop. All the members present during the meeting also attended the workshop.

Welcome



Mr. B.P. Kanungo took over as the Deputy Governor of the Reserve Bank of India on April 3, 2017. Mr. Kanungo was Executive Director of the Reserve Bank before being elevated to the post of Deputy Governor.

As Deputy Governor, Mr Kanungo currently looks after the Department of Currency Management, (DCM), Foreign Exchange Department (FED), Department of Payment & Settlement Systems (DPSS), Department of Information Technology (DIT), Internal Debt Management Department (IDMD), Department of External Investments & Operations, (DEIO) and Department of Government & Bank Accounts (DGBA).

Mr Kanungo represents Reserve Bank of India in the Committee on the Global Financial System (CGFS) of Bank for International Settlements (BIS). In addition to his professional career at RBI, he is also Chairman of Bhartiya Reserve Bank Note Mudran Limited (BRBNML) and Chairman of Governing Board, Indian Institute of Bank Management (IIBM), Guwahati.

Relieving Chair



Mr. Saeed Ahmad had been serving as Deputy Governor, SBP since January 21, 2014. He was leading the Islamic Banking, Financial Markets, Operations and Special Initiatives Groups at SBP. He has been spearheading several key initiatives for promotion and development of the Islamic banking industry of Pakistan.

Mr. Saeed Ahmad has more than 30 years of commercial and investment banking and management experience at senior executive positions in various jurisdictions including Saudi Arabia, Bahrain and United Kingdom prior to joining the State Bank of Pakistan.

Currently Mr. Ahmad is President and Chief Executive Officer of National Bank of Pakistan after leaving State Bank of Pakistan.

He was the Chairman of SAARC Payments Council upto December 2015.

Payment Systems Development in SAARC Countries

Bangladesh



The financial infrastructure in Bangladesh has been experiencing

remarkable changes for the last two decades. The timely adoption of technology blended payment solutions and services enable country's payment infrastructure to be efficient, sound, and cost effective.

In this process, to ensure the smooth movement of funds in Bangladesh, following three automated payment systems have been introduced by Bangladesh Bank:

- Bangladesh Automated Clearing House (BACH) consists of:
 - ✓ Bangladesh Automated Cheque Processing systems (BACPS), and
 - ✓ Bangladesh Electronic Fund Transfer Network (BEFTN)
- National Payment Switch Bangladesh (NPSB) includes:
 - ✓ ATM Interoperability,

- ✓ POS Interoperability, and
- ✓ Internet Banking Interoperability
- Bangladesh Real Time Gross Settlement Systems (BD-RTGS)

Besides these three interoperable platforms, Bangladesh Bank (BB) has introduced Mobile Financial Services or MFS to extend the banking services to un-served /under banked segment of the population. Recently, it has launched e-wallet service as well. A brief description of the current payment infrastructure of Bangladesh, with its updates, is presented below:

Bangladesh Automated Clearing House (BACH):

Bangladesh Automated Clearing House (BACH), the first electronic payment platform of the country for inter-bank cheque and EFT clearing was established in the year 2010. Its two modules BACPS and BEFTN clears paper based and electronic instruction based instruments respectively and settle payment obligations in a prompt, efficient, cost effective and secured manner.

Recently Bangladesh Government has decided to disburse all its payments obligations digitally to millions of beneficiaries irrespective of having bank account or not. As a part of the initiative the disbursement of social safety net benefits (such as allowances for elderly people, differently able people, freedom fighters, newly mothers on maternity, salary of primary school teachers, stipend for primary education and girls education etc.) have been accommodated in EFT channel from June 2018. With this effort, the beneficiaries having no bank account but mobile account, can also receive payments at a quick and hassle free manners.

BACH is now undergoing thorough up-gradation of its system and infrastructure. Two new features are going to be added in this system which sprung from the urge of the market demand. Among them, one is EFT multi-session for BDT and inland FC transactions with settlement at T+0 features, and the other one is inland FC cheque clearing by using Cheque Imaging and Truncation (CIT) technology.

National Payment Switch Bangladesh (NPSB):

Bangladesh Bank established National Payment Switch Bangladesh (NPSB) in 2012 with a view to facilitating inter-bank electronic payments originating from different delivery channels e.g. Automated Teller Machine (ATM), Point of Sale (POS), Internet Banking, E-commerce, Mobile Banking etc. At the initial stage all the above delivery channels could not be introduced in NPSB at a time. Hence, NPSB started its journey with the inter-operability of all banks' ATMs, in the later phase it brought the POS machines under its network, and finally it has introduced internet banking inter-operability in 2017.

At present, 53 Banks are operating card business throughout the country. Among these 53 banks, NPSB facilitates interoperable environment for 51 bank's ATM transactions. Hence, a cardholder of any bank from these 51 NPSB member banks can use ATM of all other banks all over the country. On the other hand, 48 banks are presently interoperable for

POS transactions through NPSB. Cardholders from those banks can use POS terminals of all NPSB member banks for their retail purchases in different merchant outlets. Therefore, the demand of holding cash in hand is dropping rapidly due to large acceptance of cards at POS of NPSB member banks. Cardholders do not require paying any extra charges for the retail purchases using other bank's POS terminal under the NPSB.

As mentioned earlier, NPSB is also providing Internet Banking Fund Transfer (IBFT) transactions of banks, currently 12 banks are connected with the system with others in process of joining. Account/ card holder of IBFT member banks can transfer funds (account to account/card and card to card/ account) to other IBFT member Banks account/ card holder using internet Banking. Under current rule, a customer can make IBFT transaction maximum five times and a total of BDT 200,000.00 (Two Lac) per day. Maximum amount of each transaction is 50,000 (fifty thousand) BDT. To maintain internet banking security, banks must ensure two factor authentications, SMS

alert etc. Customers are enjoying a number of banking services like utility bill payment, credit card bill payment, instalments payment of loan, insurance premium payment, DPS instalment payment etc. through internet banking.

The implementation of NPSB aids the expansion of the card based payment networks substantially and plays a great role in changing the payment preference from cash to plastic money. So far 9,650 ATMs and 39,650 POS machines have been installed in the country. A total of 12.27 million debit cards and near about 1 million credit cards have been issued till April 2018.

Real Time Gross Settlement (RTGS):

With the introduction of RTGS system in October' 2015, Bangladesh Bank has addressed the need of a system for large value payments. The system has been designed taking into account the best international practices in place. Mainly the high value and time critical payments are being settled through RTGS system instantly and individually which ensures continuous intraday finality for individual transfers. In RTGS

the transmission and processing of payment messages are automated, while settlement takes place in central bank funds, i.e., final (irrevocable and unconditional) transfer of value is recorded in the books of the central bank. BB RTGS system is capable of handling up to one million transactions per day. Currently customer initiated/requested interbank transactions (both individual and corporate) and money market transactions are mostly settled through RTGS platform.

It is worthwhile to mention that more than 7000 online branches (that are under Core Banking Solution) of 55 scheduled banks are currently connected to this system out of total 11000 bank branches of 57 banks in the country. At present, daily average transaction is around 4000 in number and BDT 60 billion in value. RTGS has been gradually gaining popularity in the market. Inclusion of domestic foreign currency transactions via RTGS platform is under testing phase and likely to go live soon.

RTGS has successfully accommodated government's

receipts in digital form from the last year. Currently export duty payments are settled through RTGS platform on real time basis which has reduced the procedural hassles and provided convenience to exporters and the customs authority as well. For implementing VAT online payment through RTGS, necessary preparation at the end of commercial banks and Bangladesh Bank has been completed already and VAT Online Payment through RTGS is expected to go live very soon. For enabling smooth operation of RTGS, Bangladesh Bank has already published BB RTGS System Rules which is considered very effective and useful by the participating banks in the market.

Mobile Financial Service:

Bangladesh Bank has introduced mobile financial services or MFS in 2011. Providing limited purpose banking services to the unbanked population in Bangladesh was one of the main objectives in introducing MFS. Immediately after introduction, it has become popular and has caught attention both at home and abroad. There are separate guideline to operate MFS in the country; it only

allows banks and their subsidiaries to operate a mobile-phone based financial service that is known as bank-led model. According to the existing guideline, an MFS provider may engage or hire outside individuals/ businesses as agents to deliver the services directly to the customers. So, this system has replaced the traditional concept of branch based banking by a new system. Many of the government payments, especially the social safety net program payments are now being paid directly into the beneficiary mobile wallet. This has brought speed and transparency into the system. At present, there are 18 MFS providers, however, only two among them hold the lion share of the market. Every day, nearly about 6 million transactions worth of 106 billion BDT takes place through this system. There are over 61 million mobile account holders and 0.8 million agents in the MFS market.

The mobile money that circulates inside the provider's network is in the form of digital money. A person, who has a mobile account, can purchase mobile money in exchange of physical currency (BDT) from an authorized agent or directly from his or her bank

account. This method is called cash in. When an account holder decides to sell whole or a part of his mobile money that lies in the mobile wallet, she/he can go to an authorized agent and get physical currency (BDT) in exchange for the mobile money. This method is called Cash out. Some providers offer Cash out services through their own ATMs. A mobile account holder, after purchasing the mobile money, can transfer it to another mobile account of the same provider, can pay various bills and fees, make merchant payments and purchase airtime. Cash in, Cash out and inter transfers have charges. The service charge schedule differs from provider to provider.

Apart from financial inclusion, the MFS has opened a window for e-commerce payment. Although card based payments are picking up in the country, many small e-commerce site are offering MFS payments options only because there is no need for a gateway and thus the operating cost is low. The consumers are also happy with this payment method because they are able to make payments without the need to provide the card number.

Recently, BB has finalized a new regulation for the MFS providers to facilitate more competition in the market and to bring MFS providers under an enhanced supervisory system. This new regulation will come in force very soon. However, sending or receiving mobile money across operators is not possible yet. The Bangladesh Bank is currently working to make the providers interoperable through NPSB platform with a view to making the market competitive and customer friendly. Already a team has been formed combining members from different stakeholders, hopefully it will be functional by the end of this year.

Endeavours for New Payment Initiatives:

Bangladesh Bank's endeavour towards modernization of country's payment systems and providing more opportunities for digital finance induced some private commercial banks and couple of technology providers/ FINTECH companies to establish Payment Gateway for providing payment services to e-commerce entrepreneurs in the country. There are various kinds

of Payment Service Operators (PSOs) that are providing technology supports to the banking sector at the back end. Currently, a payment service operator (PSO) is providing switching services to many banks that cannot afford individual switch by themselves. Moreover, some PSOs are engaged as the payment aggregator that facilitates e-commerce transactions.

In addition, Bangladesh Bank has started giving permission to the e-wallet service providers as payment service provider or PSP. Under this e-wallet facility one can connect his/her bank account with the wallet and can use e-money to pay merchant, to pay bills or to transfer money to another wallet of the same provider. A newly licensed e-wallet service provider, has already launched the product and playing significant role in merchant payment and e-commerce transactions and few more are in the pipeline. All these new initiatives helps the e-Merchants to collect the proceeds in a quick and hazard free manners, which inspires them to provide more online products / services and payment option to people for online purchase. Besides, there are few other new initiatives

which are in the process of being authorized and would be rolled out in the market afterwards.

Bangladesh Bank has recently given permission to banks for implementing Contact Less payment up to TK 3000 only in EMVCO compliant credit card transaction using NFC technology. The precondition for these types of transactions includes customers consent for having the service, sending SMS to customer for each transaction etc. The trend of using QR code technology by banks and nonbanks service providers for enhancing security and ease the payment processing has been gaining popularity in the country. Feeling the urge of wide-spread possibility of QR code based technology, Bangladesh Bank has taken initiatives for QR code standardization that will come up with a convenient solution for the whole financial sector very shortly.

These new payment ideas are fostering our payment systems to be more efficient, accessible and affordable for all. It also helps in realizing the country's dream of making a digital Bangladesh and a less-cash society in near future.

Other initiatives:

Besides all these notable efforts, Bangladesh Bank has taken initiatives for reconstruction of its IT infrastructure for ensuring efficient monitoring and control and enhance IT security which will be implemented soon. BB has also started payment systems oversight activities (in limited scale) within the Payment Systems Department.

Bhutan



Bhutan Immediate Payment Service (BIPS):

The Royal Monetary Authority of Bhutan (RMA) in collaboration with the Department of Information Technology and Telecom, Ministry of Information and Communication (MoIC), Financial Institutions and the G2C Office launched the Bhutan Immediate Payment Service (BIPS).

BIPS was developed with twin objectives to promote the use of digital payments and to provide access to financial service by harnessing the use of Information Communication Technologies (ICTs) in the country. Under this initiative,

a customer is empowered with the facility to initiate inter-bank person-to-person fund transfer and payments on an instant, secure and real-time manner through delivery channels, such as the Internet, Mobile and ATMs.

BIPS is hosted at the RMA and provides interoperability of payment across the banks and agencies and facilitates e-payments between Citizens-to-Government, Government-to-Citizens, Business-to-Business, etc. The project was developed with financial support from the Government of India and was launched on January 27, 2016.

E-money Issuers Rules and Regulations 2017:

The Board of the Royal Monetary Authority of Bhutan approved the e-Money Issuer Rules and Regulations 2017 during its 130th Board Meeting held on September 29, 2017 to promote Financial Inclusion through available digital financial services technologies (FinTech).

Due to our unique geographical landscape, banks and non-banks in Bhutan face huge challenges to

set up brick and mortar branches in providing financial services to the last-mile population. On the other hand, mobile penetration is impressive at 88% while bank account penetration stands at 38%.

Therefore, this Rules and Regulations will provide opportunity to deepen financial inclusion in the form of Mobile Wallet services by telecom's banks and the Deposit taking Micro Finance Institutions (DMFIs). This set of Rules and Regulations empower the RMA to license, supervise and regulate e-money operations with effect from October 5, 2017.

The Payment & Settlement Systems Rules & Regulations 2018:

The Board of the Royal Monetary Authority of Bhutan approved the Payment & Settlement Systems Rules and Regulations during its 134th Board Meeting.

Payment & Settlement Systems Rules and Regulations 2018 is implemented with effect from February 1, 2018 with the objectives of achieving effective regulation, supervision and oversight of payment services providers and

payment systems in promoting their safety and efficiency, thus facilitating the overall stability of the financial system in Bhutan; preventing and mitigating systemic risk; and in promoting financial inclusion and consumer protection.

This set of Rules and Regulations shall empower the RMA to license, supervise and oversee existing payment system provided by the banks, DMFI and Telco's. Further, it will also authorize the RMA to issue license and approve upcoming payment Service providers and new payment system in the country.

Streamlined the operation of Cheque Truncation System:

RMA in collaboration with member commercial banks streamlined the operation of Cheque Truncation System (CTS) by implementing Web CTS system from August 15, 2017. Scanning of interbank cheques has been handed over to commercial banks and images are sent to Bank Service Centre where cheques are consolidated and forwarded to RMA Clearing House for the processing and settlement, making the clearing cycle T+1.

Projects in pipeline:

Interconnection of Bhutan Financial Switch to the National Financial Switch of India:

RMA and the National Payments Corporation of India (NPCI), umbrella organization for retail payment systems in India is currently working on inter-connection of Bhutan Financial Switch (BFS) and National Financial Switch of India (NFS). This would enable cross-border interoperability of RuPay cards issued by commercial banks in India to be used on ATM's and PoS terminals in Bhutan and Rupay cards issued in Bhutan to be used on the Rupay acceptance infrastructure in India.

The project shall be implemented in a phased manner and for the first phase, the RMA member commercial banks will acquire RuPay card business, in other words, RuPay cards issued by Indian Banks can withdraw cash from ATM's as well as make merchant payment at PoS terminals of RMA member banks. However, for the second phase, RMA member commercial banks will issue RuPay branded card that will enable Bhutanese travellers visiting

India to carry out seamless ATM and PoS transaction on ATMs and PoS terminals of NPCI RuPay member commercial banks. First phase of the project will be completed in the month of August 2018.

As RuPay is first of its kind highly secure domestic credit and debit card payment network that prevents against anti-phishing, country like Bhutan and India that are predominantly cash based society and lack financial literacy can take the scheme's advantage. The initiative is also expected to ease travellers from both the countries any inconveniences associated with physical cash. Further, because of the need to for RMA to be "Payment Card Industry Data Security Standards (PCI-DSS)" certified, the initiative will prepare the RMA for its broader objective of integrating cross-border digital electronic payments with other parts of the world.

Implementation of Global Interchange for Financial Transactions (GIFT) system:

The RMA and the member banks implemented National Electronic Credit Systems (NECS) & National

Electronic Funds Transfer (NEFT) in 2010 and 2011 respectively, which facilitated electronic fund transfer from one bank to another.

However, over the time, these systems required necessary upgrades in order to operate in an efficient and effective manner. Therefore, the RMA has decided to implement the Global Interchange for Financial Transactions (GIFT) system in collaboration with the Indian Financial Technology & Allied Services (IFTAS). The GIFT system will enable RMA to offer batched, bulk and RTGS facilities in a Straight-through Processing (STP) manner to the banks.

The project is expected to be completed mid-October, 2018.

India



The Reserve Bank of India's Vision for payment system

encourages building best of class payment and settlement systems for a 'less-cash' India through responsive regulation, robust infrastructure, effective supervision and customer

centricity. To meet the objective of less –cash society, RBI has taken many initiatives which among others include, comprehensive review of the guidelines for Pre-Paid Instruments (PPIs), rationalising Merchant Discount Rates (MDR) on debit card, Trade Receivable Discounting System (TReDS), Bharat Bill Payment System (BBPS), introduction of new products by NPCI viz., Unified Payment Interface (UPI), toll collection –NETC, etc. Third party players “Whatsapp” and “Google” were also allowed in UPI through NPCI.

2. All these initiatives have resulted in growth of electronic payments. The large and retail payment system together, posted a growth of 44.56 percent in volume terms and 11.9 percent in value terms in year 2017-18.

3. Some of the major development are given below:

(i) **Financial Market Infrastructure:**

- **Clearing Corporation India Ltd. –Trade Repository**

The amendments to the Payment and Settlement Systems Act,

2007 (PSS Act) notified in May 2015 have brought the Trade Repository under the ambit of this Act. Clearing Corporation of India Limited (CCIL) has been designated as trade repository under the PSS Act subsequent to the amendments. The trade repository being a Financial Market Infrastructure (FMI) is to be regulated and supervised as per the policy framework under PFMI principles on an on-going basis.

- **Equivalence Recognition of CCIL under EMIR**

European Commission has observed that India has equivalent regulatory regimes for the CCPs to the European Union. Consequent to the European Commission’s equivalence decision under the European market infrastructure regulation (EMIR), a Memorandum of Understanding (MoU) was executed as part of cooperation between the Reserve Bank and the European Securities and Market Authority (ESMA). The ESMA has included CCIL in its list of recognised CCPs and also

advised CCIL as a third country CCP.

- **Financial Sector Assessment Program (FSAP)**

The Financial Sector Assessment Program (FSAP), a joint program of the International Monetary Fund (IMF) and the World Bank (WB involved in developing countries and region only), undertakes a comprehensive and in-depth analysis of a country's financial sector. FSAP was successfully conducted for India in 2017. In the financial market infrastructures (FMI)s, Clearing Corporation of India Limited (CCIL) – as central counterparty (CCP) and Trade Repository (TR) was covered as part of the FSAP. The assessment of the CCIL CCP system against the Principles of Financial Market Infrastructure concluded that the systems observe or broadly observe 21 out of the 24 principles, with the remaining three principles being not applicable.

- **Legal Entity Identifier**

RBI has mandated the use of LEI to all participants in the Over-the-Counter (OTC) markets, for

Rupee Interest Rate derivatives, foreign currency derivatives and credit derivatives transactions in India. It has been implemented in a phased manner with all the entities/ corporates to have an LEI by March 2018. Further, RBI has also issued regulatory guidelines in November 2017 mandating LEI for large corporate borrowers of banks having total exposure of ₹500 million and above. All corporates with exposure of more than ₹500 million have to obtain LEI by end December 2019. It is decided to issue a separate roadmap for borrowers having exposure between ₹50 million and up to ₹500 million in due course.

- **Real Time Gross Settlement**

Enhancement of RTGS time window and availability of additional features has improved operational efficiency of the system. To ensure appropriate pricing of services the Bank has rationalized the charges of RTGS services. However the maximum fee a member can charge from its customers remains unchanged.

The mixed MNSB (without LOC) has been enabled in RTGS to facilitate settlement of the Multilateral Net Settlement Batch file in RTGS System for settlement of transactions of both RTGS and non-RTGS members (settlement for non-RTGS members would be in Central Bank's CBS).

In order to provide assurance to the remitting customer that the funds have been successfully credited to the beneficiary account, it is envisaged to introduce the element of 'positive confirmation' in the RTGS system.

(ii) **Retail Payments:**

a) National Electronic Fund Transfer – Half hourly settlements

To enhance the efficiency of the system and add to customer convenience, additional settlements in the NEFT system at half-hour intervals were introduced with effect from July 10, 2017. With addition of 11 settlement cycles, there are total 23 settlement batches from

8:00 am to 7:00 pm which has speeded up fund transfer and fast credit to beneficiary.

b) Card Payments – Merchant Discount Rate (MDR)

To smoothen the process of card acceptance, avoid merchant's indiscriminately passing on the costs to the customers in the form of surcharge and to bring greater transparency in MDR, the RBI has issued guidelines to ensure MDR are clearly unbundled for different categories of cards.

In order to achieve the twin objectives of promoting debit card acceptance by a wider set of merchants, especially small merchants, and ensuring sustainability of the business for the entities involved, the framework of MDR was reviewed and rationalised. The framework categorises merchants on the basis of turnover, adopts a differentiated MDR for QR-code based transactions and specifies a ceiling on the maximum permissible MDR for both 'card present' and 'card not present' transactions. This has been made effective from January 2018.

c) Pre- Paid Instruments (PPIs)

To enhance the usage of PPIs and to ensure safety, security, risk mitigation and customer protection, a comprehensive review of PPIs guidelines was undertaken. Major changes were made in entry point norms, KYC requirements, rationalisation of types of PPIs, consolidation of various categories of PPIs, customer service and protection related aspects such as complaint redressal mechanism, non-forfeiture of unutilized balances, safety and security of the transactions, fraud monitoring and reporting requirements, etc.

Inter-operability between systems shall be enabled in phases for KYC compliant PPIs. This would enable the PPIs issued by banks and authorised non-bank entities to be inter-operable and also used across merchants on-boarded for other payment systems.

(iii) Other Developments:

Interoperable Cash Deposits

- National Payment Corporation of India (NPCI) operates the

National Financial Switch (NFS) which is an inter-operable ATM network facilitating cash withdrawal, balance enquiry, etc. across the network and a transparent experience to the customer in using ATM of any member bank, irrespective of the bank whose card it's holding. In addition to this, NPCI has been granted in-principle approval for introducing Interoperable Cash Deposits under NFS network subject to certain conditions.

Storage of Data: Responsibility of data protection lies with the Payment System Provider entity. It is observed that only some entities and their outsourcing partners store payment systems data partially or completely in the country. In order to ensure better monitoring, safety and security of payment system data, RBI has decided to mandate, all payment system providers and their service providers/intermediaries, storage of payment system data only in India. This data should include the full end-to-end transaction details / information collected /

carried / processed as part of the message / payment instruction.

Unified Payment Interface (UPI): RBI has authorised NPCI to set up and operate UPI in August 2016. It is a fast payment system wherein end-users can send and receive money instantly upto ₹ 1 lakh (₹100 thousand – proposed to be increased to ₹ 200 thousand shortly) per transaction while interbank settlement takes place on deferred basis. UPI enables inter-operability among mobile banking applications of different banks, facilitates merchant pull payments besides offering convenience to customers to transact using the UPI app of any bank while the accounts may be maintained at different bank. The UPI, which is application-based and can be used on smartphone with internet access.

Under UPI, multiple bank model for large third party players has also been introduced. Google Tez and Whatsapp provide multi bank model in UPI. These applications provide only

customer interface whereas transaction processing and settlement is done by Payment System Provider bank as per UPI framework.

National Electronic Toll Collection (NETC): NETC is operated by NPCI with the approval of RBI. NETC is a framework for creating an automated and interoperable electronic tolling structure across the country's network of highways. This system is based on unique identification of the vehicle using passive RFID NETC tags registered on NETC mapper (a repository of the NETC Tag IDs).

Bharat Bill Payment System (BBPS): BBPS, operated by NPCI, is an integrated bill payment system which offers "anytime anywhere" interoperable bill payment service to customers using online payments as well as through a network of physical agent locations. The system provides multiple payment modes and instant confirmation of payment.

The benefits envisaged are that (i) leveraging technological capabilities, entities which were undertaking billing business as also new players like payments banks, small finance banks and co-operative banks would provide services to the unbanked/ underbanked segment of the population; (ii) the “Bharat BillPay” brand provides customers an access to bill payment through mobile, internet, kiosk, agent outlets, bank branch, BCs, through various modes like mobile banking, internet banking, mobile app, website, cash (at agent outlets), debit/credit card, etc.; (iii) it provides the billers the opportunity to save cost by reducing their own collection points by tie up with one or two Operating Units and get access to all payment options, customers, and payment outlets; (iv) it would facilitate standardisation prescribed by Central Unit for enrolment of billers, agents, clearing, settlement, risk mitigation, charges, complaint

management, etc.; system setup, security requirements, complaint registration/tracking, etc.; (v) benefit from fee/ charges.

Trade Receivables Discounting System (TReDS)

TReDS was envisaged for resolving the liquidity crunch faced by MSMEs by facilitating the financing of their trade receivables from corporate and other buyers, including Government Departments and Public Sector Undertakings (PSUs), through multiple financiers. TReDS provides the MSME sellers an alternative financing mechanism. Better price discovery is facilitated through bidding by financiers on TReDS which is on the basis of credit rating of buyers rather than MSME sellers.

Three entities have been authorized to set up and operate TReDS and all have commenced operations.

Maldives



Maldives Monetary Authority (MMA) has been working on developing the national payments infrastructure to facilitate innovative and interoperable payment solutions with the objective of increasing financial inclusion through promoting electronic payments. Major milestones achieved during the past two years which includes introduction of Mobile Payment Services and Cheque Imaging and Truncation (CIT) in the Maldives.

As a step towards enhancing the usage of electronic payments, during May 2015, MMA in collaboration with the tax authority - Maldives Inland Revenue Authority, established a mechanism to collect tax payments via MRTGS system which is currently being widely used by the public. A notable factor is that the volume of transactions made through this has significantly increased from 2015 to 2017 as a result of public trust and confidence over this mechanism. While only 72 transactions were made in 2015, the usage has increased to 8,815

transactions in 2016 and 17,768 in 2017.

In November 2016, MMA introduced Cheque Imaging and Truncation in the Maldives with the objective of improving the efficiency of cheques clearing process. This allows the banks to exchange cheque images and data through the ACH for clearing the cheques, increasing the efficiency of the clearing process and allowing funds to be credited to customer's account faster than the manual process. MMA conducted various trainings and information sessions for banks and general public for smooth transition to the automated clearing. Automation of cheque clearance process has mitigated the associated risks of manual clearing, reduced nationwide clearing cycle and increased efficiency in terms of speed, cost and robustness.

Further, the development of financial sector and the payment services is challenged by the geographical nature and size of the country, to access financial services through conventional banking channels which increases the need for development and

digitization of payment systems to a greater extent. MMA's initiation to increase financial inclusion through promoting electronic payments began in 2015 with the initiation to enhance payment services through mobile network operators. With full mobile network coverage across the country and high penetration of mobile phones within the population, payment solutions that utilize the mobile telecommunications network have the potential to reduce the prevalence of cash in the economy. Hence, in 2016 MNO-led mobile payment services was first introduced in the country allowing customers to register to a "Mobile Wallet Account" in order to deposit, withdraw, P2P transfers, and make bill payments, etc. Customers are not required to have a bank account, as the agent network manages the liquidity and acts as a medium for cash-in and cash-out services. Since the implementation of the service, significant improvements has been brought to the service including expansion of the distribution network, increasing the types of payments that could be made from m-wallets and introducing smart pay options which allow customers

to make payments by scanning a merchant QR code.

With the continuous efforts to promote efficiency of electronic payments and to minimize manual intervention and to enhance the efficiency in the payment and settlement services, during August 2017, a secure connection was established between MMA and the Ministry of Finance and Treasury to facilitate a means to communicate government payment instructions in an electronic format. This has considerably saved time and cost in payment and settlement services.

Despite the availability of various means of electronic payment services and increase in usage of electronic payments such as cards & internet banking in the past few years, cash and cheques have remained the dominantly used instrument for making payments across the different sectors of the economy. This is mainly due to the lack of integration and interoperability across banks and other payment service providers resulting in duplication of efforts and delays in receiving the funds to the intended customers. Consequently,

mobile operators are faced with challenges in linking their services with the bank accounts which is an essential feature to provide mobile wallet top-up service. Also, as the efficiency of such solutions is dependent on the underlying payments system infrastructure, the delays in settlement and other inefficiencies remain unresolved. In addition to issues faced with integration of payment system the other contributing factors to lower usage of electronic payments are, limited awareness among the public on usage of electronic payments along with high costs involved in the electronic facilities provided by the banks.

Hence, in order to address the existing challenges in the payment system, MMA has recently embarked on an initiative to transform the payments landscape in the Maldives to enable simple, fast and secure mode of payments to the people living in all the islands. The primary objective of this project is to increase financial inclusion for engagement in economic activities through establishing a fast, convenient, secure and reliable payment infrastructure that would

address the current issues in the payment system by facilitating the users to make and receive payments instantly irrespective of where they live or bank. An essential part of this project also includes strengthening the regulatory framework by establishing effective rules and standards that are in consistent with global best practices that promotes innovation and competition in payment services.

Nepal



Nepal Rastra Bank (NRB), as a regulatory authority is solely authorized for regulation and supervision of Bank and Financial Institutions including Payment Systems in the country. Nepal Rastra Bank Act, 2002, article (4) has mentioned objective to develop a Secure, Healthy and Efficient payment system in Nepal. Article (5) of NRB Act provides authority to establish and promote the payment systems, clearing and settlement activities and to regulate those Payment Systems.

To fulfill the objectives crafted by Act, Nepal Rastra Bank is doing its

best to regulate and promote the payment systems. Nepal Rastra Bank has taken different important initiatives to achieve the above mentioned objectives. One of the major initiatives, among others, is the formulation of National Payment Systems Development Strategy (NPSDS, 2014). The Strategy has identified the need of RTGS and gradual implementation of National Payment Gateway/Switch for efficient and secured Payment system in Nepal.

The legal framework for Payment System in Nepal currently consist of NRB Act, the Banks and Financial Institutions Act, the Payment and Settlement Bylaw, Nepal Payment System Development Strategy and the Licensing Policy for Institutions and Mechanisms Operating Payment Related Activities, Payment System Oversight Framework, and will include the planned Payment and Settlement Act.

The Payment System of Nepal is mostly bank led model. The basic payment infrastructure is provided by banks and financial institutions of Nepal. Apart from bank and financial institutions, there are non-

bank institutions which are a part of payment system of Nepal. Such non-bank financial institutions are categorized as Payment Service Providers (PSPs) and Payment System Operators (PSOs).

NRB has Payment System Department, responsible for licensing and oversight of Payment Systems of Nepal. Till date, NRB has provided license to 41 institutions including 'A' grade Banks, PSOs and PSP's E-sewa, IMEpay etc. Furthermore, 20 non-BFIs have been provided Letter of Intent (LOI) to operate the payment service related activities. Electronic Cheque Clearing (ECC) and Inter Bank Payment System (IPS) is operated by Nepal Clearing House Limited (NCHL). The daily average volume of ECC is around 43000 cheques per day and 7000 transactions per day for IPS.

By all these efforts, digital payment activities and practice of using cards and other mode of transactions including mobile financial services has been increasing gradually. As a result, we can mention the achievements of digital payment activities by figure as we are having 2624 ATM terminals; 5,207,598 debit

cards; 94,714 credit cards; 96,965 prepaid cards; 3,999,803 mobile banking users and 784,286 internet banking users in the Nepalese Payment System.

Moreover, Payment and Settlement Act 2075 is in pipeline and in the process of approval from the Federal Parliament of Nepal. Enactment of this Act will further foster to strengthen the digital payment system in Nepal. At Present, Payment Service Providers (PSPs) are providing digital financing services to their customers through wallets and other product innovations. This will enable and increase the coverage and access of digital service to remote geographical areas of Nepal. Digital Payment Technology is fast moving with lot of innovations and it is reachable to all walks of life. However, digital payment is not risk free. For that reason, NRB is aware and effortful to minimize the associated risks to make the payment system secured, healthier and also to safeguard the customer protection. RTGS procurement and installation process has already been started. Along with RTGS, CSD and National Payment Switch/Gateway are also under study.

Pakistan



Pakistan has witnessed substantial developments in both Large-

value and Retail Payment Systems in order to promote digital financial services. Cashless/ digital payments have seen a rise in the country due to the availability of variety of digital payment platforms, conducive regulatory environment for banks and payment system operators for improving Alternate Delivery Channels (ADCs) across various market segments.

However, the large segment of Pakistani population still relies on cash to conduct transactions. In the country, during FY17 a total of 1.1 billion transactions were processed by banking channels, which were valued at PKR 456 trillion. Cheques still remain the mostly used instrument for paper-based payments.

Initiatives of SBP to Promote Digital Payments in Pakistan – Vision 2020

SBP has taken a number of initiatives during the recent years for the

development of payment systems in the country. Strengthening payment infrastructure in the country by provision of favorable regulatory environment, interoperability of payment systems, promoting Digital Financial Services (DFS) in partnership with private and public sectors are some major initiatives.

Regulatory Developments

Branchless Banking Regulations

Revised Branchless Banking Regulations were issued in 2016 with the aim to foster growth in m-wallets promoting the innovative approaches to maximize availability of banking services to all segments of the society through usage of Information & Communication Technologies.

Regulations for Mobile Banking Interoperability

SBP, in collaboration with Pakistan Telecommunication Authority (PTA), is developing and promoting Branchless Banking in Pakistan. Jointly, SBP and PTA have issued regulatory framework on interoperability of Branchless Banking. Through interoperable Branchless Banking services,

customers can now transfer funds between banking accounts and mobile-wallets through their cell phones having account of any bank and SIM of any telco.

Regulations for the Security of Internet Banking

SBP has issued the Regulations for Security of Internet banking to promote its usage and increase the security of transactions conducted via internet banking.

Regulations for Prepaid Card

Prepaid Card regulations provide level playing field for all the existing and potential users. These Regulations cover all the relevant aspects of the functionality of prepaid cards such as detailed guidelines on the issuance of cards, permissible load limits, restriction on use, dispute resolution mechanism, consumer protection and other operational aspects.

Regulations on Card Security

In order to prevent cardholders from risks, SBP has issued the Regulations on Card Security. These Regulations are helpful in card standardization and enhance security features of

payment cards. SBP has developed these Regulations as part of its objective to control financial stability and maintain confidentiality of customer's data and further promote effectiveness and secure means of electronic payment mechanisms.

Issuance of Rules for PSO/PSP

SBP issued Rules for Payment Systems Operators (PSOs) and Payment System Providers (PSPs) to allow entry of non-banks in the payments arena, being one of the major steps in financial inclusion. Under these Rules, two major payment systems operators have been regularized ATM Switch Operator and establish a Point of Sale (POS) Switch and E-commerce payment gateway and clearing house function. A number of applications are under process for providing various payment services in the country.

Infrastructure Developments

National Payment Gateway (NPG)

SBP is working with relevant stakeholders to establish National Payment Gateway (NPG) in the country for bulk retail payments that would enable the integration

of existing or planned payment services. It will also facilitate the Government in providing instant and better services to the general public.

Issuance of Pakistan's First Domestic Payment Scheme i.e. 'PayPak'

Paypak, the first domestic payment scheme in Pakistan is aimed at reducing dependency on global payment schemes with transactions being routed, recorded and settled within Pakistan. The new card is being used within Pakistan and will offer the benefit of low cost, ease of affordability and security to consumers. As June 2018, 6 major banks have started acquiring PayPak Cards whereas 16 banks have so far issued 930,209 PayPak Cards which can be used for transactions at 38,559 POS machines across the country. Further, PayPak cards are accepted on all ATM terminals in Pakistan.

Enhancing the Usage of RTGS (PRISM) for General Public

To facilitate the general public especially business community in the country for transferring large value payments in an efficient and

prompt manner, SBP allowed third party fund transfers facility as well through RTGS (PRISM) system.

Implementation of Straight through Processing (STP)

SBP implemented STP to electronically integrate participants' core banking system with PRISM system through standard interfacing mechanisms to enable automated transfer of payment transaction without requiring manual re-entry. STP will optimize the speed at which transactions are processed. Potential benefits of STP are reduced processing cycles, elimination of manual entry, increased processing efficiency, and facility of conducting transactions at branch level and reduced chances of errors.

Clearinghouse Membership for Central Directorate of National Savings (CDNS)

In 2017, SBP allowed Central Directorate of National Savings (CDNS), direct membership of Clearinghouse i.e. NIFT. Through this, Banks are now able to accept at their counters, the profit coupon / withdrawals slips pertaining to Pensioners Benefit Account,

Behood Saving Certificate and Saving Account of CDNS.

Inter-Bank Transfer of Home Remittances via PRISM Message Type MT-102

To ensure timely Inter-Bank domestic transfer of Home Remittances to their beneficiaries, under Pakistan Remittance Initiative (PRI) arrangement, SBP allowed the use of Message Type MT-102 in its PRISM system free of charge with no limits on minimum amount and instructed banks to credit the beneficiary's amount on the same day.

Home Remittance Account

With the objective to facilitate swift and cost effective inflow of Home Remittances through Branchless Banking (BB) channel and to increase the financial inclusion through enhanced usage in BB/mobile wallets, SBP introduced a new category of Home Remittance Account under the ambit of BB Regulations.

Promotion of e-Commerce in Pakistan

SBP is working in close coordination

with Ministry of Commerce to undertake technical work on various aspects of e-Commerce in Pakistan. A National Policy on e-Commerce will be formulated that shall support and work towards building e-Commerce market and required eco-system, which will also encourage local trade and foreign investments in the country.

Sri Lanka



The Central Bank of Sri Lanka (CBSL) has been proactively steering Payments and Settlement Systems (PSS) to facilitate digital innovations and promote the use of electronic payments within the economy, in line with the global trend towards digital payment innovations. This facilitation is done in a two-pronged strategy: first, by providing robust infrastructure to process real-time payments of all values, second, by encouraging market-led innovations and providing guidance to ensure financial systems stability and safety of all stakeholders. This is operationalised through optimising

on the early investments in large value PSS, islandwide bank branch and ATM networks, and telecommunications infrastructure as well as widespread mobile phone adoption of over 100% and rising Internet connectivity to build integrated low value electronic payment systems above existing infrastructures. The availability of robust infrastructure has ensured the safety, efficiency and high accessibility of low value payment solutions and increased financial inclusion.

The most recent infrastructural development to achieve these goals is the Common Card and Payment Switch (CCAPS) “LankaPay”. CCAPS, which is designated as the National Payment Switch of the country, consists of five switches i.e. Common ATM Switch (CAS), Common Electronic Fund Transfer Switch (CEFTS), Shared ATM Switch (SAS), Common POS Switch (CPS) and Common Mobile Switch (CMobS). In order to facilitate the implementation of CCAPS, CBSL monitored the progress of implementation of CCAPS according to the timelines imposed on financial institutions

for joining CCAPS by CBSL. Accordingly,

- (a) Common ATM Switch (CAS), which started live operations in 2013, includes all card issuing banks as its members. In order to enhance the security of card transactions carried out through CAS network, CAS member banks were instructed to enable EMV technology in ATM machines installed by all CAS members.
- (b) The Common Electronic Funds Transfer Switch (CEFTS), which is the second phase of CCAPS, was implemented on August 2015. CEFTS provides a common infrastructure to clear payments effected through multiple payment channels such as ATM, Internet Banking, Mobile Banking, Kiosks and over-the-counter. All licensed commercial banks are now members of the CEFTS.
- (c) Lanka Pay Online Payment Platform (LPOPP) was launched on 20 July 2017 to facilitate real time payments to Sri Lanka Customs. This infrastructure is gradually moving towards integrating all

Government services into a single payment platform.

- (d) A National Card Scheme, which will facilitate introduction of low cost payment card products, will be implemented by end 2018 in partnership with an international card scheme. The Common POS Switch, will commence live operations after implementation of the national card scheme.

CBSL further strengthened the regulatory framework relating to e-commerce and mobile applications (apps) based payments in 2018. A Direction was issued on Acquiring Payment Card based Electronic Commerce Transactions through Service Providers to stipulate conditions on acquiring payment card based transactions through Service Providers in order to ensure timely payments to merchants and to safeguard the interests of cardholders. A guideline on Minimum Compliance Standard for Payment Related Mobile Applications was issued to set minimum compliance standards for Mobile Applications used by Financial Institutions to provide payment services.