*Financial Inclusion & Payment Systems: Recent Trends, Current Challenges and Emerging Issues**

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Shri. Narendra Singh, CMD, Bank of Maharashtra, Shri. K R Kamath, CMD, Punjab National Bank & Chairman, Indian Banks' Association, Shri Raghuvir Singh, Executive Director, Bank of Maharashtra and Chairmen-Managing Directors & Executive Directors of banks, distinguished delegates, ladies and gentlemen. It is indeed a pleasure to be here in BANCON 2012 organised by the Indian Banks' Association. I am especially happy to share my thoughts on financial inclusion & payment systems in this conference hosted by the Bank of Maharashtra which has been a pioneer in implementing Information Communication and Technology (ICT) based financial inclusion. I am particularly reminded of a reference made by the bank to the Reserve Bank of India way back in late 60s' seeking permission to use agents for providing banking services & the opinion given by the Legal Department of the Reserve Bank of India which formed the basis for allowing Business Correspondents to expand banking outreach with ICT support in 2006 as recommended by the Internal Group on Rural Credit & Microfinance set by the Reserve Bank of India in 2006.

2. Financial inclusion as a concept, process and business proposition is not new for the banking sector of India and, in fact, it dates back to the phase of nationalisation of banks and even beyond that when the Imperial Bank was nationalised to become the State Bank of India in 1955 and its subsidiaries were formed following the recommendations of the All India Rural Credit Survey Committee (AIRCS) in 1954. One of the objectives of nationalisation was aimed at taking banking to the masses. Financial inclusion, thus, has been and continues to be at the centre of the policy priority of the country. With passage of time the means of achieving deeper and sustainable financial inclusion has shifted towards innovative methods and adoption of technology-led products. In this changed environment, Payment Systems (PS) have become a critical component of financial inclusion for bringing the unbanked into the formal banking channels, particularly as we move towards the second phase of financial inclusion that aims to cover the villages with population of less than 2000. I am therefore very happy to have got this opportunity to speak on the payment system and financial inclusion in this conference which is focused on '*innovating to unlock the next decade of banking*'. I intend to highlight the recent trends, the current challenges and the emerging issues in fostering new payment methods and instruments with focus on the inter-linkages between a robust payment system and a sustainable financial inclusion.

Role of Payment Systems in Financial Inclusion

3. Global Partnership for Financial Inclusion (GPFI), a forum of G-20, defined financial inclusion as '*a state in which all working age adults have effective access to credit, savings, payments and insurance from formal service providers.*' 'Effective access' involves convenient and responsible product and service delivery channels at a cost affordable to the customer and sustainable for the service provider so that the financially excluded population uses the formal financial services rather than the informal channels that provide convenient but costly services on near 24x7 basis. An efficient and ready-for-future payment and settlement system is expected to act as a catalyst to ensure this effective access and increase the pace of financial inclusion.

Payment System Vision 2012-15

4. The Payment system Vision Document: 2012-15 of the Reserve Bank envisages to proactively encourage

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electronic payment systems for ushering in a less-cash society in India. The vision is to ensure payment and settlement systems in the country are safe, efficient, interoperable, authorised, accessible, inclusive and compliant with the international standards. Payment systems would be driven by customer demands for convenience, ease-of-use and access that will propel the necessary convergence in innovative e-payment products and capabilities. Integration of various systems through unified solution architecture and current technology would lead to adoption and usage of resilient payment systems. Regulations would enable channelising innovations and competition to meet these demands consistent with international standards and best practices. The overall regulatory policy stance would be oriented towards promoting a less-cash/less-paper society, in a way a '*green*' initiative. The emphasis would be on the use of electronic payment products and services that can be accessed anywhere and anytime by anyone at affordable prices. Thus, the seven cornerstones of financial inclusion, *i.e.*, **A**ccessibility, **A**vailability, **A**ffordability, **A**wareness, **A**cceptability, **A**ssurance and **A**ppropriateness have been incorporated as basic principles to enable payment system to play a role of catalyst in furthering financial inclusion.

Payment System as Catalyst and Enabler for Financial Inclusion

5. The process of financial inclusion is influenced by both demand and supply side factors. Demand side factors include financial literacy and awareness, felt need for the products, credit absorption capacity, *etc.* On the other hand factors, such as, product availability, delivery methods, service providers, *etc.* influence the supply side. Payment systems have the potential of acting as a catalyst on the supply side of financial inclusion by way of appropriate designing and efficient delivery of products, processes and systems. In one of the recent surveys of the World Bank[1], more than 100 countries reported nearly 170 plus innovative retail payment instruments and methods being used for enhancing financial inclusion. Some of the common products involved Person to Business (P2B), Person to Person (P2P) and utility bill payments and a small proportion also reported tapping the payment system for transfer of government benefits. It was observed that innovative payment instruments & methods were drivers of financial inclusion in nearly 14 per cent of the countries surveyed.

6. In sync with the international developments, India has also been witness to some efficient and effective innovations – both in the field of access channels and products. In the payment system landscape of the country, the Reserve Bank of India acts as regulator, supervisor and, also at times, as a service provider. Certain major payment systems initiatives, such as, ECS, NEFT and RTGS have been game changers that have helped millions of people to use electronic medium for faster transfer of money from one place to another, and, to a large extent, the Reserve Bank played a critical role in the development of these products. It has, however, been observed that benefits of these facilities have not yet reached the vast segments of the population who are unable to access formal banking channels. The Business Correspondent (BC) based business model using low cost ICT has opened up an opportunity for the banking sector to provide appropriate payment system products at affordable cost. The continuous shrinking of prices of ICT based solutions can be used to provide the financial services using multiple delivery channels, such as, ATMs, kiosks, mobile phones, internet and contact and contactless cards through PoS. Innovations in product design and delivery channels have provided a fillip to the process of financial inclusion and the need for deeper and search for sustainable financial inclusion has paved way for many innovations. Traditional payment services no longer make a business case for large volume of small ticket transactions. This has led to many innovations, such as, special bank accounts or pre-paid accounts,

[1] World Bank Global Payments Survey, 2010

use of BCs, use of technology for initiating and authenticating transaction, *etc.* At the same time, it is important to realise that innovations have taken place and have been successful due to initiatives of all the stakeholders, partnerships of banks and non-banks and creation of an enabling business environment by the regulator and in the process have opened up new avenues for tapping the unreached markets.

International Approach

7. Some of the international experiences in this regard are worth mentioning to draw useful lessons that can be implemented in our country in the existing policy environment for financial inclusion. Countries like China, Brazil, South Africa, Mexico, Kenya and Philippines have implemented various technology-based financial inclusion programmes and their success stories have been replicated in various countries albeit with modifications based on local needs. Internationally, there are different approaches towards delivery of payment services to the unbanked and under-banked customers using innovative methods. For example, the BC model with traditional PoS devices and cards is used in Brazil and China. The Mobile based payments are extensively used in Kenya, South Africa, Philippines and Mexico. A few countries like the USA and China use pre-paid payment cards as an instrument to provide payment and banking services to the unbanked population. Broadly there are three models: (i) bank-led model (*e.g.,* Brazil/South Africa), (ii) non-bank led model (*e.g.,* Kenya), and (iii) hybrid model (*e.g.* Philippines). These models have evolved taking into account the factors like banking penetration in a country, levels of literacy, availability of necessary eco-system, *etc.* In the context of technology-enabled financial inclusion the success stories of Brazil, Kenya and Philippines are often quoted. Let me briefly mention about their business models.

Brazilian Banking Correspondent Model

8. Brazil adopted a 'correspondent' banking model to expand the reach of banking services to its remote areas. The success of this model can be gauged by the fact that while there were 63,509 agents in 2000, their number had grown to 132, 757 by January 2010. This enabled the spread of banking and financial services to even the far-flung areas of Brazil. The PoS devices with cards are used for providing a wide range of services from deposit taking, money transfers, opening accounts, bill payments, verifying and forwarding documentation to provide credit, *etc.* This wide network has also helped in the delivery of government benefits to families covered under the *Bolsa Família* programme. It enables the beneficiaries to withdraw their benefits locally, without having to travel long distances and has resulted in reducing the transaction costs to the government in providing social payments.

Kenyan Non-bank MNO Model

9. In 2006 one of the leading mobile operators of Kenya launched M-Pesa, an m-commerce payment service, aimed at the unbanked. M-Pesa enables customers to exchange cash in return for an e-money account which is stored on the server of a non-bank, such as, a mobile operator or an issuer of stored-value cards. The balance can be used for making payments, storing funds for future use, transferring funds or converting back to cash, *etc.* In Kenya, the latest available data shows that the number of M-Pesa mobile phone money transfer service users is around 14 million. Its agent network has also increased to close to 28,000 outlets. The M-Pesa model has been a major success in providing mobile payment services, especially for remittances to the Kenyan citizens. In neighbouring countries, however, the quest to replicate the model has proved to be quite challenging and has not been as successful. One of the primary reasons attributed to the difference in the levels of success in Kenya as compared to other neighbouring countries is the existence of only one dominant Mobile Network Operator (MNO) in the country.

Philippines Hybrid Model

10. SmartMoney was launched as a remittance product by an MNO (*viz.*, Smart) in partnership with a commercial bank (*viz.*, Banco d'Oro). While the MNO managed the brand and execution of the service, the underlying product was akin to a pre-paid account of the bank. This was a classic example of bank-supported model where the MNO assumed product and marketing leadership. Unlike SmartMoney, the fundamental difference in G-Cash, another product launched in Philippines, was that the G-Cash model did not have a bank to assume direct liability for the deposits of customers. This was due to the fact that G-Cash was itself the issuer of the mobile money account. In other words, this was a non-bank led model. The retail accounts were actually held by a wholly owned subsidiary of the MNO, and, therefore, somewhat ring-fenced from the operational cash flows of the MNO although in reality the MNO was assuming liability for a type of deposit. The aggregate balances of G-Cash would however be held as deposits in banks that are regulated by the central bank of the country.

11. The above examples illustrate the use of different methods to further the goals of financial inclusion. While in the case of the Brazil it is the PoS device along with the card (a somewhat traditional mode) with the business correspondent which is enabling financial inclusion in Kenya and Philippines, it is the mobile technology which is driving this effort. As can be seen from these examples, policymakers and regulators, especially in developing countries and emerging markets, are adopting different models to reach to unbanked and under banked customers taking into account the regulatory comforts based on financial sector eco system and security in providing safe payment systems using different technologies.

The Indian Reality and the Policy Approaches

12. If we consider our own banking eco-system, it has about 95,000 branches, about equal number of

Table: Select indicators of FI: cross-country comparison

Country	Number of branches (per 0.1 million adults)	Number of ATMs (per 0.1 million adults)	Bank loan as per cent of GDP	Bank deposits as per cent of GDP
India	10.64	8.90	51.75	68.43
Australia	29.61	166.92	128.75	107.10
Brazil	46.15	119.63	40.28	53.26
France	41.58	109.80	42.85	34.77
Mexico	14.86	45.77	18.81	22.65
United States	35.43	-	46.83	57.78
Korea	18.80	-	90.65	80.82
Philippines	8.07	17.70	21.39	41.93

Source: Report on Trend & Progress of Banking in India, Reserve Bank of India 2011-12

ATMs across the country and 278 million debit cards. Yet a large proportion of our population remains financially excluded. Data indicates that only about 40 percent of the adult population in the country has a bank account; only 25,000 plus villages have a bank branch out of the 600,000 villages in the country. Only 13 percent of the people have a debit card and only two percent have a credit card. The same low level of penetration is seen for both life and non-life insurance products. The select indicators of financial inclusion (Table) also prove that India has a long way to go in achieving the desired levels of financial inclusion.

13. As the Indian financial system is pre-dominantly led by banks, the financial inclusion policy orientation has naturally been biased towards the bank-led model. The non-bank entities, however, play an important role in providing necessary support to expand the reach particularly for the banks, crossing the proverbial last mile. The issue is given the geographic spread of the unbanked and the low level of financial literacy, how do we step up the public policy objective of financial inclusion? One eminently feasible way to overcome the challenge is by tapping existing and innovative technologies, especially in the realm of payment systems. This can be accomplished by providing access to the formal banking channel for activities,

such as, remittances. Another method could be to provide alternate payment instruments, other than cash, for both P2P and P2B payments, such as, prepaid payment instruments (PPI). The payment systems, thus, can be considered as effective tools working on the supply side of financial inclusion by providing products and systems for fulfilling the payment needs of the financially excluded while the demand side is propelled by the desire of the excluded segment to make use of formal banking channel for their banking and payment needs. The Reserve Bank of India and the Government has been working to create an enabling environment for providing payment system infrastructure and services as supply side response to emerging demands for deeper financial inclusion arising out of heightened awareness, requirement of the Financial Inclusion Plans (FIP) being implemented by banks and the moves of the Government to electronically transfer large number of benefits/ entitlements to the citizens.

Use of Business Correspondents (BCs)

14. One of the major experiment as the supply-side enabler for financial inclusion has been the Business Correspondent (BC) model. The BC model is meant to be a low cost alternate to the brick and mortar banking network with an ability to reach the unbanked/under-banked population. In spite of the difficulties faced while implementing the first phase of FIP, as on September 30, 2012 banks could open 1,58,159 BC outlets providing access to financial services in 1,99,702 villages in the country. This initial period of test and learn phase has made the stakeholders understand the issues involved. The experience, thus, gained has enabled evolution and further rationalisation of the policy framework. There are, however, constraints which have to be addressed effectively for the successful implementation of the BC model. I would not dwell on them here except to state that all the stakeholders are determined to overcome them as they gear up to meet the challenge as we embark on second phase of financial inclusion under which all villages with the population of less than 2000 would be covered. Going forward, the challenges would be leveraging the products & processes now available or on the anvil (*e.g.* integration of financial inclusion server with CBS server, implementation of inter-operable micro ATMs, resource sharing with other banks and non-banks, use of RFID technology, expanded usage of Aadhaar enabled infrastructure, *etc.*) and adapting the innovations that can not only enhance the FIP but also prove to be a sustainable business model. This would require answers to questions, such as, whether banks need to innovate by tapping their own infrastructure and resources or is there a business case in setting up shared infrastructure. I am sure that innovations through such collaborations would definitely unlock the immense business potential that the Bottom of the Pyramid (BoP) customers offer through the ICT based BC model.

Aadhaar-enabled unified payment infrastructure

15. Here I would like to specifically touch upon the Aadhaar-enabled unified payment infrastructure. The issue of direct transfer of subsidies (DTS) and electronic benefit transfer (EBT) from the Government to the intended beneficiaries has been in focus of the policymakers in the recent times. Both the schemes are based on an innovative approach of using Aadhaar based platform as a unique financial address for transferring financial benefits to the accounts of beneficiaries and helping them to withdraw/use such benefits as per their convenience. The mechanism involves tapping the existing banking channels including the BC network to route all payments electronically to the accounts of the beneficiaries using Aadhaar as an authentication mechanism. BCs would be equipped with micro-ATMs and undertake transactions on the basis of Aadhaar number and bio-metric authentication. The financial transactions are routed through the Aadhaar Payments Bridge. The Aadhaar-enabled Payments System (AEPS) using micro-ATMs enables the beneficiaries to operate these accounts for withdrawal, deposit and remittance

purposes. The volume of transactions that are likely to be routed through the AEPS is expected to register an exponential growth. The report of the Task Force on Direct Transfer of Subsidies (DTS) (Chairman: Shri Nandan Nilekani) highlights the huge business potential this eco-system presents to the stakeholders with electronic benefit transfer/DTS payments adding upto roughly 3.5 per cent of the GDP and another ₹ one trillion estimated as business opportunities in the form of domestic remittances. Given such large numbers, we are looking at huge transaction volumes. The issue, however, is whether the industry is geared for this expected surge in volumes by pro-actively taking measures to upgrade the processing capacities, mapping Aadhar with beneficiary account numbers and working in collaboration with Central and State Governments to digitise the data bases in quickest possible time.

Mobile penetration

16. Given the high level of acceptance and penetration of the mobile telephone in India, there is a case to further leverage this for providing banking services to the people at the bottom of the pyramid. Worldwide it has been recognised that the mobile telephony has the potential to universalise access to banking and payment services in a low-cost and seamless manner to the existing and potential customers. Latest data released by the Telecom Regulatory Authority of India (TRAI), the mobile subscriber base of the country as at end-October 2012 is 904.23 million with the urban subscribers accounting for 62.68 percent (566.81 million) and the rural subscribers for 37.32 percent (337.42 million). Available data indicates that the use of mobile banking services amongst this huge base of subscribers is, however, very low. Even amongst the existing bank customers, less than one per cent are covered under the mobile banking services. Notwithstanding the existing low base of customers, the growth in mobile banking transactions has shown an increasing trend. For example, in the month of October 2012, 4.44 million transactions amounting to ₹4.97 billion were processed as compared to 2.25 million transactions amounting to ₹1.61 billion processed in October 2011 – an increase of about 197 per cent in volume and approximately 308 per cent in value terms. It is, however, evident that the potential of mobile banking technology is yet to be fully exploited, even though the numbers may look impressive. It is also evident that mobile banking is yet to gain the critical take-off stage that would propel it to provide banking/payment services at a cheaper, secure and seamless manner to the existing and potential customers.

Interbank Mobile Payment Systems

17. The Interbank Mobile Payment Systems (IMPS) is a mobile based payments system and is owned and operated by the National Payment Corporation of India (NPCI). The IMPS facilitates access to bank accounts and transfer of funds through mobile phones. The system, launched in November 2010, provides real time transfer of funds between the customers of different banks on 24x7 basis. Initially enabled only for P2P remittance, NPCI has been given approval to use this innovative payment system for Person-to-Merchant (P2M) payments as well. This is expected to give a fillip for IMPS usage. Pilots are on to use IFSC code and bank account number or the Aadhaar number of the beneficiary for money transfer using IMPS. This important development is expected to make it easier for the customers to use IMPS as it is no longer a requirement that the beneficiary mobile number is registered with the destination bank and there is no requirement for a Mobile Money Identifier (MMID) for the beneficiary customer. IMPS has also been enabled for usage over ATM and internet banking. The existing two factor authentication for both these channels have to invoked while making payments through IMPS, *viz.*, card plus PIN for ATM and user ID plus net banking/transaction password for internet banking. In view of its multi-channel capabilities it has now been rechristened as **IM**mediate **P**ayment **S**ervice. NPCI is now attempting to provide frontend

consolidation to banks in the form of common Unstructured Supplementary Service Data (USSD) platform to enable the users to use low end mobile handsets that do not require any specific application to do mobile payments/banking. These innovations in IMPS are expected to promote mobile banking transactions in the country in a big way.

Electronification of KCCs

18. The smart card linked, mobile based and Aadhar enabled KCC, popularly known as m-KCC, was launched in July 2012 and is seen as a great example of harnessing the latest technology for user friendly applications for financial inclusion of farmers. Anecdotal evidence, however, indicates that banks are yet to launch the product in a big way. Another similar experiment relates to the *Rupay Kisan Credit Card* launched by the NPCI. The banks certified to issue such cards are found to be issuing only ATM cards and not *Rupay* debit cards. The PoS terminal network which has crossed 0.6 million has low acceptance of *Rupay* cards. The lack of infrastructure is causing limited use and acceptability of *Rupay* cards. It is rather surprising to note the lackluster response of the banks and their inability to identify the business potential in such innovative products.

Access Criteria

19. To facilitate wider access to payment systems both centralised (*viz.,* NECS, NEFT and RTGS) and decentralised (*viz.,* MICR, ECS, RECS), membership criteria have been rationalised and made open to all licensed banks. An alternate mechanism of sub-membership has also been opened for accessing centralised payment systems for all licenced banks like the Regional Rural Banks and Co-operative banks which have the capabilities but are not participating in centralised payment systems on account of either not meeting the access criteria or because of cost considerations. The sub-membership route has been provided to expand the reach to all banks even those located in smaller centres. This is expected to deepen the reach of the electronic payment systems and provide the benefit of modern electronic payments to people in smaller centres as well.

Domestic Money Transfer

20. Relaxations in domestic money transfer guidelines have been made to provide remittance facilities in a safe, secure and efficient manner targeting particularly the large migrant population. Three schemes involving cash pay-out/cash pay-in and card-to-card transfers have now been made available. These schemes are; (a) cash pay-out arrangement for amounts being transferred out of bank accounts to beneficiaries not having a bank account with a transaction cap of ₹10,000 subject to an overall monthly cap of ₹25,000 per beneficiary; (b) facility for walk-in customers not having bank account (*e.g.,* migrant workers) to transfer funds to bank accounts (of say, family members or others) subject to a transaction limit of ₹5,000 and a monthly cap of ₹25,000 per remitter; and (c) facility of transfer of funds among domestic debit/credit/pre-paid cards subject to the same transaction/monthly cap as at (b). The first two schemes involve a bank account at one end of the transaction for facilitating fund transfers. Simultaneously, the customer charges have been rationalised, especially for amounts upto ₹10,000 in NEFT & the same has been now capped at ₹2.50. Taking advantage of these policy measures, one of the banks has implemented a '*green channel card*' for walk-in customers who regularly send money to a particular account. Under the scheme, details of name and address of a walk-in customer alongwith the beneficiary's name, account number and the IFSC code of the beneficiary's branch are captured on a mag-stripe card. The cardholder can swipe the card at a branch/ATM/kiosk of the bank and remit money to an account holder of any other branch of the bank. This mechanism helps in avoiding repetitive filling up of forms by a walk-in customer & lowering the operational risk involving transactions based on inaccurate data in a cost effective manner.

Rationalisation of Merchant Discount Rate (MDR) for Debit Cards

21. Debit cards in India far outnumber the number of credit cards in India. Their usage, however, reflects that they are predominantly used at ATMs to withdraw cash and not used at merchant establishments probably due to the lack of depth of penetration of PoS, terminals, especially at smaller merchant locations. This is on account of the fact that the MDRs for debit and credit cards were uniform and acted as a disincentive. This was somewhat strange given that a debit card is a secured product while a credit card is part of the unsecured credit product portfolio of the banks. To encourage the acceptance of debit cards at smaller merchant terminals, Reserve Bank has introduced a differential MDR for debit card transactions. A lower MDR is expected to act as an incentive to even the smaller merchants to accept card payments as the fee payable by them to the acquiring bank would be relatively small. As the policy measure has been recently unveiled, the Reserve Bank is keenly watching the market for further developments.

Rationalisation of PPI Guidelines

22. To provide a boost to cash-less transactions and bolster the issuance of semi-closed PPIs, the five categories of semi-closed PPIs have been replaced with three broad categories. The first category of instruments up to ₹10,000 can be issued in electronic form with minimum details of the customer. Total outstanding at any point of time and total value of reloads in a month cannot exceed ₹10,000, the second category of instruments, which can vary from ₹10,001 to ₹50,000, can be issued in electronic but non-reloadable form by accepting any 'officially valid document' defined under Rule 2(d) of the Prevention of Money Laundering Act and in the third category instruments upto ₹50,000 can be issued with full KYC and can be reloadable in nature. We have taken these measures in order to deepen the semi-closed PPI market in the country and facilitate small value transactions without involving bank accounts. Consequent upon such relaxations, all the three categories of PPIs can be used for domestic money transfers. There is thus tremendous scope for the non-bank PPI issuers and banks to work together to facilitate domestic funds transfer. The issue, however, is if the banks and non-bank issuers of PPIs are in a position to forge meaningful partnerships. Without such partnerships taking root, domestic remittances through this channel will not materialise to the extent that they should. In such a scenario, the PPIs will continue to be used for the limited purposes that they are being used today and would not really aid in financial inclusion.

Role of Non-banks

23. Subsequent to the enactment of the Payment and Settlement Systems Act, 2007 the Reserve Bank has authorised non-banks to enter the retail payment space. The non-banks have pre-dominantly gravitated towards PPI issuance and it is hoped that the recent rationalisation of the PPI guidelines, as mentioned earlier, will spur their efforts in increasing non-cash transactions in the economy. Given that semi-closed PPIs can be used for funds transfer, we are keenly awaiting the developments in this area. Non-banks have now been allowed to set-up and operate ATMs under the scheme of White Label ATMs (WLAs). This has been done to increase the penetration and deployment of ATMs, especially in the smaller Tier III to Tier VI centres, thereby extending anytime, anywhere banking facility to a wider segment of population. But for this venture to succeed there has to be a complementarity between the banks and non-banks. Unless the financially excluded are brought into the ambit of banking and cards are issued the infrastructure in the form of ATMs will remain unutilised. Further, the ATMs, existing & those in the pipeline, need to have the facilities for multiple utilities so as to reduce the demand for cash & provide value added & cost effective services to the customers.

Policy Measures on the anvil

24. I shall now briefly touch upon some of the policy measures which are on the anvil to fasten the process of financial inclusion through supply side payment system enablers. As I have mentioned earlier, one of the key variables as one can notice in our Payment System Vision document is the emphasis on promoting access and inclusion. To this end, the Reserve Bank has indicated an intention to provide a regulatory framework for the introduction of technology based innovative products for the use of all. Reserve Bank has also noted the need for ensuring the availability of low-cost and safe domestic remittances to large number of unbanked population and migrants through appropriate technology and affordable cost has also been emphasised.

25. The proposed introduction of International Bank account Number (IBAN)/Basic Bank Account Number (BBAN) is expected to result in efficiency in the system through introduction of a single parameter (*i.e.*, the account number) that would replace different types of bank/branch codes (*e.g.*, IFSC, BSR code, MICR code, SWIFT BIC code, *etc.*). IBAN's primary purpose would be to facilitate (i) domestic/ cross-border inter-bank electronic payment, (ii) avoid routing errors in domestic/cross-border payments, (iii) facilitate straight through processing and (iv) enable making payment in a reliable manner as remitter can validate the beneficiary account number. This is being studied by a committee (Chairman: Shri Vijaya Chugh) which is looking at the entire gamut of bank account number system. A committee has also been constituted (Chairman: Shri. G. Padmanabhan) to recommend feasibility of paper based and electronic GIRO payment system, dove-tailing the existing payment system infrastructure. The GIRO is a payment instruction effected by a payer for credit to payees account through any bank branch. It is akin to anytime anywhere payment. In the case of cheque GIRO, the model is essentially to facilitate customer of one bank to deposit cheques drawn on another bank at the counters of the branch of a third bank for collection/realisation of proceeds through the existing clearing infrastructure. Providing an organisational framework for proliferation of PoS so as to expand the card acceptance infrastructure is another priority area of the Reserve Bank of India. The regulatory stance thus would continue to facilitate innovations to achieve the goals of inclusion, accessibility and affordability while remaining technology neutral. Convergence in innovation would, however, be the key area of focus.

Emerging Issues for the Banks: The 7'C Framework

26. Having highlighted some of the current challenges in tapping the payment systems for deeper and sustainable financial inclusion, I shall now highlight a few issues that need to be addressed by banks if they have to unlock the potential of an efficient business model for meaningful financial inclusion. I shall now use a 7'C framework to put forth my views. The 7'C framework comprises: *Cost, Convenience, Confidence, Convergence, Commitment, Consumer Protection* and *Communication* – all of them critical for both the payment system and the financial inclusion.

Cost

27. Cost is an important component to ensure affordability of modern electronic payment systems to the financially excluded. Stakeholders need to leverage technology to create efficient systems and processes to reduce transaction costs so that the products can be accepted and accessed by more number of people creating volume. The cost of transactions needs to be based on trade-off between affordability for the user and sustainability for the provider. The benefit of reduction in transaction costs should be passed on to the customers, especially at the BC outlets. The corollary to the increase in the number of transactions is that it would make the BC outlets viable. It is, therefore, necessary that appropriate plans are put in place for effective technology deployment in payment systems and products to reduce costs.

Convenience

28. It is important to ensure the convenience and comfort of the customers when they are offered payment products. For reaching the unbanked people, simple innovative solutions, such as, providing text and voice facility in local languages, standardised coloured icons of ATMs for easy recognition, standardised layout of ATM screens, biometric authentication, *etc.* would enable greater acceptability. Further, the number of BC outlets needs to be increased to provide easy access to people. Banks may consider having exclusive BCs to handle remittance by appointing more number of merchant establishments in urban areas where migrants can avail of remittance service facilities. One of the difficulties faced by migrants undertaking a remittance transaction is providing/writing the IFSC code. Banks and BC outlets should proactively help the customer in getting and filling up the code, particularly for the less educated customers.

Confidence

29. The primary component of acceptability of any financial product, particularly when it is an ICT based product, is the level of confidence of the user. Confidence is built by providing a secure and robust banking and payment system with very high standards of integrity. Zero liability to inculcate confidence in electronic transactions is an option which should be explored and implemented early. Robustness of the system can be ensured through regular Business Continuity Plan (BCP) and Disaster Recovery (DR) exercises. Systems should be put in place to arrest number of phishing and identity theft cases pertaining to card, mobile and internet banking. IT security systems like redundancy, firewalls, anti-virus updation, role-based access system should be reviewed at frequent intervals to fight the attacks. Banks may tap the services of Mobile Banking Security Lab (MBSL) set up by Institute of Development & Research for Banking Technology (IDRBT) to test security of mobile banking platform and products. Some banks have implemented the system of sending alerts and confirmations using SMS on the status of the payment processing during the transaction life-cycle of an electronic payment initiated by a customer. This has been very well appreciated by the customers. In short, technology alongwith appropriate simplified processes would help people to repose confidence in electronic payment system.

Convergence

30. Convergence is the key to provide payment system and banking services through different delivery channels. Collaboration between the MNOs and the banks would enable leveraging strength of each other in facilitating financial inclusion at less cost. Convergence of technologies like interoperability of various delivery channels and processes would result in reduction in costs in providing services and would provide wider choices to the users. The usage of shared infrastructure like cloud computing in some of the low ticket size but high volume transaction handling areas would help banks to stay competitive. Congruence in products and processes shall bring in uniformity across the banks and help in creating standardised products that can be easily understood by the consumers. Convergence among banks in the processes and technology would provide facilities to customers to do transaction at any branch of any bank irrespective where a person maintains the account, leading to universal banking experience.

Commitment

31. Although technologies, products, policies and processes help in creating enabling eco systems for financial inclusion, commitment at the top to take the process forward is the need of the hour. The commitment at the top should be reflected in growth of business volume from the targeted group and increase in accessibility to the banking and payment system services to the hitherto financial excluded groups. The ICT based BC model as a delivery channel stands on three pillars, *e.g.*, branch manager/BC/CSP and the technology service provider. Lack of commitment at

any one level will not sustain the delivery channel. Therefore, the Top Management of the banks have to continuously review systems and processes to ensure the three pillars are in alignment with each other. The persons who provide services at the last mile (*viz.*, BC/CSP) matter a lot in the entire business chain. They are to be, therefore, taken on board by providing adequate remuneration and incentives to motivate them to deliver the services at the doorsteps of the customers besides appropriate training on products, processes and customer service.

Consumer Protection

32. With increasing complexities of technologies, products and processes that are being offered to the consumers, consumer protection has assumed critical importance. Apart from the creating environment for informed decision making, the consumer protection policies need to provide protection against unfair and deceptive practices, enable consumers to easily access the recourse mechanisms to resolve disputes, and ensure maintenance of privacy/secrecy of personal information by the service providers. Therefore, a cost effective and accessible consumer grievances redressal mechanism particularly as we add more & more less informed BOP customers to our fold needs to be integrated into all products, processes and business models of the banks instead of leaving it to the regulators alone. People should feel assured of getting timely redressal of their grievances without much of a hassle. Simultaneously, technology should be used extensively for resolving and monitoring grievances without waiting for getting a complaint from customer.

Communication

33. Establishing communication channel with the targeted people on products and services plays an important role in advancing financial inclusion. Consumer awareness on risks and reward attached to various banking and payment system products including its proper usage has to reach to the people in the language which they can relate to and understand. Banks need to build skill sets of their employees and BCs on matters like convincing people to use ICT based banking services and subscribe to different payment system products to make the financial inclusion a viable proposition. The security aspects and the responsibility of the users in respect to each product should form a part of the consumer communication programme. The financial outreach, town hall events and roadshows organised by various entities including the Reserve Bank are positive steps in this direction. The mass media should also be suitably exploited to create consumer awareness. To popularise the electronic payment products among the stakeholders like merchants and consumers, Electronic Banking Awareness and Training (e-BAAT) programmes are being planned by the Reserve Bank along with the banks. Banks have to very clearly focus on the communication aspect if they have to reap the benefit of modern payment system products & processes which have to be understood & then used by the wider segments of the population.

Concluding Thoughts

34. Given the extent of financial exclusion in our country, both in terms of quality & quantity aspects, financial inclusion efforts have to be vigorously pursued by all the stakeholders. Many challenges, however, still remain. Banks need to think differently to bring more innovations to realise the aim of a financially inclusive society. Payment systems being one of the main building blocks of the financial inclusion all the stakeholders need to work on technologies, processes and products to achieve the desired goal of providing access to formal financial services to the unbanked/under-banked population in a time bound manner to match the growing aspiration of people. Simultaneously, it is critical to recognise that financial services provided under financial inclusion plans do not jeopardise the stability to the financial sector, ensure integrity in transactions and provide adequate consumer protection. Reaching the unbanked areas through agents like BCs using

technology and by offering suitable payment products to keep the business model sustainable is a challenge. This challenge has to be squarely met to further the public policy goal of sustainable and meaningful financial inclusion through constant endeavours to address the emerging issues of **C**ost, **C**onvenience, **C**onfidence, **C**onvergence, **C**ommitment, **C**onsumer Protection and **C**ommunication.

35. The greatest challenge that beckons the banks is how do they bring out innovations in processes & products that are people friendly, in other words, focus has to be on 'grounded innovation'. Lars Erik Holquist, Principal Research Scientist at Yahoo Labs Eco says '*An innovation is more than just a great idea…. Innovation requires attention to other people: what they value and what they will adopt. It must contribute to transformation in a society and be adopted by users.*' Grounded innovation '*is an approach that aims to balance the two axes of inquiry: understanding how the world works and invention. Today we are living in a world where we have to consider both technology and users as drivers of innovation. Simply put, grounded innovation is when your technology meets utility*'. In today's context, we are probably at the inflexion point of grounded innovation as far as financial inclusion and payment systems are concerned. The need of the hour is to unlock the next decade for people at the bottom of the pyramid waiting to be financially included. All the stakeholders, therefore, need to think differently to bring more innovations for universal financial inclusion by harnessing the developments in the payment system.

Thank you all for patient hearing.