Duvvuri Subbarao: Retail payments – perspectives and way forward

Valedictory address by Dr Duvvuri Subbarao, Governor of the Reserve Bank of India, at the Regional Seminar on Payment and Settlement Systems, organised jointly by the Reserve Bank of India and the Bank for International Settlements, Mamallapuram, Chennai, 19 March 2009.

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Introduction

It is a great delight for me to be here at the conclusion of this seminar on Payment and Settlement Systems aimed at improving our understanding of the way forward on this vital segment of central bank infrastructure. Here, at the Reserve Bank of India (RBI), we have traversed a steep learning curve over the last several years, and come a long way in implementing an efficient and effective payment system. I am deeply conscious of the fact that we still have a long way to go. On the way forward, we are challenged by the fact that the unknown unknowns are larger than the known unknowns, which in turn are larger than the known knowns. Our task on the way forward really is to learn from the international best practices and adapt them to the Indian context. Seminars such as this are, therefore, very rewarding learning experiences for us. I hope, the foreign participants too found this seminar useful, rewarding and, may I add, enjoyable.

I am told you covered many important topics over the last three days, and I gather, there is greater clarity on various issues such as the growing importance of retail payment systems, the relative roles of banks and non-banks in the payment systems, the main principles governing oversight, prepaid cards, aspects relating to cross-border remittance services and even issues pertaining to branchless banking.

I want to use the opportunity of this valedictory address to share with you the significant changes in the payment systems in India, the Reserve Bank’s role in this area and to look ahead at some of the challenges going forward.

But first allow me a small digression. I hope you have all had some time off for going round and enjoying the sights and heritage of this famed part of India. Mamallapuram bears testimony to the rich, ancient culture of this region, which was long forgotten, thanks to rapid developments in its vicinity, leaving this once-upon-a-time great trading port almost at the brink of extinction. Nature too, played a role in the erosion of this piece of history. The Great Shore Temple that we see is believed to be actually one of an original seven pagodas (spires, temples), the rest having been eroded or submerged. Nature, once again, lent her helping hand, and I am told that after the tsunami of 2004, parts of the submerged remaining temples were visible, albeit briefly, when the waters of the ocean receded temporarily. We now have more “concrete” evidence of the role played by this small town in India's ancient trading culture.

The payment system and central banks

Let me now try to relate this to the payment systems of today. Payment and settlement systems play an important role in improving overall economic efficiency. They consist of all the diverse arrangements that we use to systematically transfer money – whether using currency, paper instruments such as cheques, or a variety of electronic channels. It is something we use every day. Indeed the ability to make and receive payments with confidence remains the cornerstone of any commercial activity and it is at designing, implementing and running robust payment systems that our efforts are focussed.

There has been a phenomenal change in the architecture and technology of payment systems in the last decade. Until just a few years ago, payments systems in India were almost entirely based on paper, with currency and cheques being the dominant form of payment for both retail and wholesale transactions. With technological advancement, it is today quite a complex collection of disparate arrangements, with different participants, different rules, and different processes in each place, but which all ensure quicker flow of money. Payment systems, therefore, have implications for the play out of monetary policy, and, therefore, form an important part of a central bank's mandate.

The main concerns in ensuring robust payment systems are efficiency and safety of the systems. Internationally, the nature and intensity of central bank supervision over the retail payment systems vary considerably. In many cases, the oversight is limited to only systemically important payment systems. Some do it with explicit legal authority as in Australia, some based on their regulatory power on banks as in the United States, and some, as part of the broader financial stability objective, as in the United Kingdom.

Apart from economic efficiency, payment systems have a social dimension too as an efficient payment system is an important prerequisite for financial inclusion. The focus of attention in payment systems worldwide has traditionally been on Systemically Important Payment Systems. Of late, however, with financial inclusion becoming a major objective, the existence of efficient retail payment systems is being perceived as a significant public good, which deserves increased attention.

The importance of Payment and Settlement Systems prompted the Governors of the central banks of the Group of Ten (G-10) countries to establish in 1990 a permanent central bank Committee viz., the Committee on Payment and Settlement Systems (CPSS), as a successor to the Group of Experts on Payment Systems, set up by them in 1980. The CPSS was established to monitor and analyse developments in domestic payments and settlement systems, as well as in cross-border and multilateral netting schemes. The Committee has done some pioneering standard-setting work in this area, including in the emerging area of e-money. It is no coincidence that the CPSS Secretariat is located at the Bank for International Settlements, our co-host for this seminar.

Evolution of payment systems in India

Payment systems in India – like in most parts of the world – began as cash-based systems. The evolution over time of commerce and trade triggered varied payment instruments came into use in India. Even though the cash system dominated, there were some early payment systems not denominated in cash – such as the primitive form of the bill of exchange – the *HUNDI* – which continues to be in use in some form, in some parts of the country even today! With the advent of banking, cheque clearing through a bankers' clearing house, conducted on a net settlement basis, was the most predominant form of clearing and settlement, despite the inherent risks associated with net settlement systems.

The electronic era in India began in the early 1990s when the Reserve Bank developed technology-based payment and settlement systems, and also took on the oversight of these systems. Let me give you just a few significant figures to illustrate our rapid transition from paper to paperless systems. The share of cheques in the total value of economic transactions (including through cash) declined from 5.2% in 2001 to 3.9% in 2008. The value of funds transferred through electronic means in the entire payment systems increased phenomenally – from about 2% a decade ago to about 74% now. The number of transactions in the retail system, inclusive of cheques, electronic payments and cards, is also striking, with seven million transactions per day, accounting for more than 95% in terms of the number of total transactions. This underscores the importance of continued focus on retail payment systems in India.

The growth of non-conventional forms of retail payment systems in India reveals an interesting trend. We are all aware of the role of credit cards in our lifestyles and spending patterns. In India though credit cards had a somewhat lacklustre beginning. I still recall how, in the late eighties, when a government owned bank – what we, in India, call a public sector bank – undertook this pioneering activity, there were few takers for this payment mode. The Indian culture is to save and then spend, not spend first and repay later. The task for the public sector bank in the early years was therefore not so much to market a new product but to bring about a fundamental change in the cultural mind-set and attitudes. More importantly, making the merchant establishments accept credit cards for payment of goods and services was not an easy task either. Banks had to use innovative strategies (such as providing free credit cards for their own account holders, cards to even non-customers of the bank, enticing merchant establishments with schemes of discounts and rewards, etc.). Similarly, in the early stages of development, a few banks got together to inter-connect and share their ATMs. The initiative failed to get off ground and had to be abandoned. Yet, today, the key words in the financial sector are inter-connectivity and shared payment system infrastructure. You will be interested to know that today we have a national-level ATM switch, which inter-connects nearly 35,000 ATMs of banks, across the country.

With the opening up of the economy, many more banks joined the credit card band wagon. Soon, some banks began aggressively pushing credit cards even to unwilling customers and there were also concerns about the methods used by entities to which the recovery function had been outsourced by these banks. The Reserve Bank, which was not much concerned about the low level of penetration of credit cards in the initial years, quickly stepped in to ensure fair practices and customer protection. The Reserve Bank also took upon the task of assessing the existing retail payment systems and laying out a clear road map for the future. Legal reforms constituted the first step in this direction.

The Reserve Bank's role

The rapid expansion of the economy and the phenomenal increase in non-cash payment transaction clearly defined the task and the challenge for the Reserve Bank. This led to the 2007 Payment and Settlement Systems Act, the draft tenets for which were formulated by the Reserve Bank. This legislation provides a legal basis and framework for most of the requirements of payment and settlement systems. It also provides clear definitions relating to the process of netting and settlement finality and ensures full and final settlement to participants, with no recourse to roll back or reversal of transactions.

The Payment and Settlement Systems Act also mandated the Reserve Bank to regulate payment and settlement systems, encompassing not only the system providers – which are most often the commercial banks – but also intermediaries as well as technology providers. We have just begun the process of authorisation of payment systems. Hopefully this will instil greater confidence amongst the users of such systems, in addition to ensuring that the systems are robust and well designed, based on sound principles of optimal risk management. We also believe they provide for high levels of reliability of operations and are in compliance with international requirements for combating money laundering.

To aid the Reserve Bank in managing this task of payments and settlements, a Board for Regulation of Payment and Settlement Systems (BPSS), comprising both the RBI management and external experts, was established. International experts, who have reviewed our legal framework and implementation systems, have endorsed the scope and coverage of the Payment and Settlement Systems Act.

Recent initiatives and innovations

Safety is at the heart of payment systems. Recognising its importance, the Reserve Bank took the early initiative for creating a guaranteed platform for systemically important payment systems. The result was the establishment of the Clearing Corporation of India Ltd (CCIL) in 2001. The CCIL is owned and managed by commercial banks, and the Reserve Bank has no direct stake. You will recognise that this arms-length relationship is in accordance with the principles of good corporate governance.

The CCIL functions as a Central Counter Party (CCP) for select categories of transactions such as those in government bonds, inter-bank foreign exchange market, call money market, etc., thus effectively managing, and mitigating, the counterparty risks arising out of possible default by any constituent. The CCIL platforms are all fully electronic with high levels of operational security and provide Straight Through Processing (STP). This is a unique initiative and has been widely acclaimed as a success. This infrastructure has efficiently mitigated counter party risks in over-the-counter (OTC) markets – which, you will note, were at the root of the crisis in the credit derivatives segment in the current global financial turmoil.

The Reserve Bank was instrumental in establishing in 1999 the INdian FInancial NETwork (or INFINET). The INFINET, similar to the S.W.I.F.T., is a platform for domestic transmission of inter-bank messages in electronic mode. The Cheque Truncation system, implemented by the RBI in India, on a scale not seen anywhere else in the world, is yet another landmark in the advance of payments and settlements. The system will help customers accelerate realisation of their cheques, leveraging latest technology.

I can claim with pride that state-of-the-art technology is a characteristic of many retail payment systems in India. It may be of interest to note that we have been using the Public Key Infrastructure (PKI)-based security in electronic transactions using the INFINET since as early as 1999 – many years before the international network-based financial message transfer systems, such as S.W.I.F.T., migrated to this technology.

In developing payment systems, the Reserve Bank had to be sensitive to and conscious of India's low levels of literacy, and its economic and cultural diversity. Accordingly, we developed local language-based ATMs, ATMs using VSAT-based telecommunication for difficult geographical terrain, solar power-based systems, and multi-application-based smart cards for small-value payments.

Building on these multidimensional efforts, the Reserve Bank is now facilitating the process of setting up the National Payments Corporation of India, under the aegis of the Indian Banks' Association which will, in due course, provide and operate retail payment systems with the objective of ultimate settlement in central bank money.

Challenges

As technology relentlessly advances, payment mechanisms will expand and proliferate. This will make the task of the central bank more complex and challenging. Let me take a few moments to highlight some of the major challenges the Reserve Bank faces and the manner in which we are seeking to address them.

- The first challenge relates to the multiple roles of the central bank. In its developmental role, the Reserve Bank is an operator as well as a settlement provider for the many electronic payment systems. These include the Electronic Clearing Service (ECS-Credit and Debit Clearing and the National ECS) which is akin to the ACH services elsewhere in the world, the National Electronic Funds Transfer (NEFT) for one-to-one electronic-based credit-push funds transfers, etc. The operations of these systems will eventually migrate to the proposed National Payments Corporation of India, but until that happens, our challenge is to also manage the operational aspects of these systems with adequate firewalls.
- The Reserve Bank is statutorily empowered to regulate and supervise commercial banks. But the non-banks and other entities too provide vital payment system services and there was a need to bring these too under a unified oversight function. Towards this end, the Payment and Settlement Systems Act authorises the Reserve Bank to also regulate and supervise these non-banks and other entities. The second

challenge, therefore, is managing a myriad of service providers, all of who play an important role in the smooth operation of such payment systems.

- Another challenge for countries like India, which receive a large number of remittances from migrant expatriates, is to ensure the availability of an efficient, low-cost payment system for transfer of funds. Here, central banks of different countries will have to take a view on the role of non-bank entities in the process.
- Fourth, the high rate of technological obsolescence demands that such systems are subject to regular and continuous upgrades, not only at the service / settlement provider end, but also at the customer end. The problems faced in replicating a high-technology requirement across a large number of users are well known. Migration of magnetic stripe based cards to chip-based cards and the need for token-key-based authentication devices instead of a PIN are some aspects that may be impacted by costs as well as implementation-related logistics. Fortunately, in the Indian context, these are relatively easier to address since we joined the user-based technology band wagon at a later point of time. Of course, we cannot, and indeed should not, count forever on the advantage of leap frogging in technology, and going forward, our challenge is to be at the frontiers of best practice.
- The final challenge, and one that is growing in importance by the day, is to ensure the integrity of these systems against money-laundering and financing of terrorism.

Perspectives on the way forward

Let me now look ahead to some emerging opportunities, in retail payment systems and the tasks they set for central banks. According to international estimates, the volume of retail payments in major countries far exceeds the number of large-value transactions. These volumes offer opportunities for potential entrants / service providers to vie for market share. Users will also be willing to try out new systems which provide them with more comfort, ease of operation and efficiency. That said, central banks worldwide will have to remain ever vigilant to ensure that the new systems conform to the critical minimum requirements.

Second, one of the advantages of multiple systems and service providers widen choice for the user. Competitive forces will, of course, ensure that the products and services are continually upgraded. More importantly, risks will be dispersed across many units and not bundled in just one basket. The need to regulate and monitor the operations of multiple entities will be an important challenge for central banks.

Third, market dynamics will ensure operational efficiency especially when volumes are substantial. A case in point is the Indian mobile telephone industry. When they were first introduced about a decade ago, the average cost of a mobile phone call used to be Rs.24 per minute (roughly half a US Dollar) and that used to be charged on both the caller and the call receiver. Today, India boasts of some of the world's lowest per call rate – most local calls are charged only to the caller, and the per call rate is just Re.0.50 paise per minute (just about one US cent). A reduction of as much as one-fiftieth in the original call charges in so short a span of time calls for revisiting the Moore's law! An encore of similar dramatic reduction in costs in the retail payment systems is not beyond the realm of possibility. A beginning has already been made in the area of ATM-based payments whereby no charges will be levied on customers for use of ATMs not belonging to their own bank, from April, 2009.

Fourth, as retail payments go into large-scale expansion, new issues will emerge. The demarcating line between the large-value and the retail-payment systems is getting blurred. This calls for increased efforts to set up bench marks even for retail payment systems. Considering the risks inherent in such systems, fresh initiatives are needed to address customer-protection issues. These assume greater importance in the context of the increasing spread of the concept of branchless banking.

By all indications, retail payments are going to be the drivers of the future payment and settlement architecture. The Reserve Bank will take proactive steps towards their operationalisation but within a regulatory framework that will mitigate the risks. My staff have advised me that they already have a cryptology for risk management – RISK, which would take into account the following:

> **R** – Recognition – to identify any risk early on and take proactive steps before it gets out of hand;
>
> **I** – Improvisation – of new methods, techniques and tools to secure better monitoring, and providing for a feed-forward rather than a feed-back system;
>
> **S** – Segmentation – to address smaller systems and sub-systems individually so as to address their unique features while also being mindful of the systemic impact; and
>
> **K** – Knowledge – to enable knowledge-based decisions in a knowledge-powered economy, resulting in scientifically-engineered and output-oriented action.

All the above efforts are aimed at providing a better risk management framework. Retail payments hold the key to the value chain as economies achieve progress in today's complex world. Innovation, risk management, effort and increased international co-operation will be the key to success.

I hope you all profited from your participation in this seminar, and more importantly, enjoyed spending the last three days here in Mamallapuram. For my part, I must say that I greatly enjoyed being here.