K C Chakrabarty: Mobile commerce, mobile banking – the emerging paradigm

Address by Dr K C Chakrabarty, Deputy Governor of the Reserve Bank of India, at the India Telecom 2009 Conference organised by the Department of Telecom, Government of India, in collaboration with the Federation of Indian Chambers of Commerce and Industry (FICCI), New Delhi, 4 December 2009.

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1. Introduction

1.1 It is indeed a privilege for me to be here at the "India Telecom 2009" event being organised by the Department of Telecom, Government of India, in collaboration with FICCI. I thank Mr. J.S. Deepak, Joint Secretary, Department of Telecom for extending me an invitation and providing me an opportunity to share my thoughts on Mobile Commerce or M-Commerce. M-Commerce is an area which is rapidly changing the way people conduct their financial transactions. Besides, this is an area which offers abundant scope for inclusive growth, which I believe is the theme of this conference. This is also an area which promises business opportunities to service providers and other players in the field of mobile communications, and last but not the least, this is also an area which presents new challenges to the regulators across the globe. E-Commerce is process of providing the buyers of goods and services, the option to carry out such transactions, and pay for the same, without being physically present. E-commerce platforms can bring in efficiency and cost benefits to buyers. But the key to such arrangements is the delivery. The internet is only one of the mediums to reach to the buyer, the confidence of the buyer depends on the reliability, safety and security of the delivery system and the trustworthiness of the merchants. Same would be applicable to m-commerce. Mobiles by the same logic can only be a facilitator and the Mobile Service Providers (MSPs) the service provider for this channel.

2. Basic characteristics of m-commerce/e-commerce

2.1 When we talk of e-commerce or m-commerce, we need to understand the key differentiation between this type of commerce and traditional commerce.

2.2 In traditional commerce, delivery is a support function and a routine to be taken care by clerks or lower level staff. It is taken for granted unless something goes dramatically wrong. But in e-commerce or m-commerce, “delivery” becomes Critical Core Competence in which businesses will be evaluated and preferred. Its speed, quality and responsiveness becomes decisive competitive factor which determines the success and sustainability of the company. No existing m-commerce player is organized for it. Very few yet are thinking in these terms. One who desires to enter this field must evaluate its “***delivery***” capability.

2.3 Second important issue in m-commerce or e-commerce is the need for collaboration between technology service provider and provider of goods and services. If it is m-medicine, we require collaboration between mobile service provider and health/medicine service provider. Similarly, in e-broking, we require collaboration between technology partner and broking service provider. Similarly, in m-banking or m-payment, we require collaboration between mobile service provider and banking/payment service provider. We cannot and should not think of, at the initial stage, mobile payments without bank accounts.

2.4 It will also be useful before debating on any alternative modes for banking/payment delivery or concluding that banks have failed in providing financial inclusion, to consider the following three aspects related to the payment delivery and banking technology in India:–

I. Banking technology is of recent origin in the country. Scaling up may, therefore, require more time.

II. Payment is only one aspect of banking. Financial inclusion goes beyond remittances. Other products and services are required which banks are better equipped to provide.

III. Given the above aspects and that the enabling provisions like appointment of business correspondents have been permitted only recently, it would be early to conclude that banks have not been successful.

I hasten to add that if the banks continue as laggards, the system will have to look for alternate non bank model. The important end of inclusive growth cannot suffer on account of our insistence on a particular means/model.

3. Evolution of electronic financial services (e-banking/e-commerce/m-banking/m-commerce)

3.1 Payment methods in the settlement of transactions for goods and services have evolved over the years as a result of innovations and developments in technology and business practices. From the earliest known barter systems to the cash-based approach and later, to other paper-based payment instruments, the progress in the payment methods was a relatively gradual one. However, due to rapid strides in technology, more efficient payment methods have evolved, mainly in the last few decades. Electronic mode funds transfer has afforded an efficient and secure means of transferring funds between bank accounts and is fast displacing paper-based payment methods.

3.2. Reserve Bank of India has been keeping in pace with the developments and introduced the Electronic Clearing Service (ECS) followed by the Electronic Fund Transfer System, later extended as the National Electronic Fund Transfer (NEFT) and the Real Time Gross Settlement (RTGS). All these systems offered a secure and efficient platform for transfer of funds between bank accounts without the need for paper-based payment instruments. The growing acceptability of ECS, RTGS and NEFT by banks and consumers of banking services of these schemes is evidenced by the following facts:

- ***ECS***
  - The volume of ECS (Credit) transactions handled increased from 69,019 in 2006–07 to 88,394 in 2008–09. The volume of ECS (Debit) transactions increased from 75,202 to 1,60,055 during this period.
- ***NEFT***
  - The number of CBS enabled bank branches offering NEFT service has increased from 42,900 to 54,200 in 2008–09 and to 60,839 as on September 30, 2009.
  - The volume of transactions in EFT/NEFT increased from 4,776 in 2006–07 to 32,161 in 2008–09. The aggregate value of transactions increased from Rs.77,446 crore to Rs.2,51,956 crore during this period.
- ***RTGS***
  - The number of bank branches offering RTGS service has increased from 43,512 to 55,000 in 2008–09 and to 60,144 as on September 30, 2009.
  - The daily average volume of transactions is 90,000 for about Rs.1,200 billion of which 82,000 transactions for about Rs.980 billion pertained to customer transactions as at end of August 2009.

I would like to mention here that in India, RTGS facility is currently available only for transactions of Rs. 1.00 lakh and above. With more bank branches coming under CBS, the volume and value of transactions settled under RTGS and NEFT is expected to show further increase in the coming years.

3.3 The growth of internet and accessibility to the world at large from a PC at home or office not only brought about a revolution in access to information but the related developments in technology also heralded the emergence of e-payments/e-commerce. From the convenience of the home, one could plan one's travels and book rail/air tickets instantly avoiding the hassles of visits to the travel agent or standing in a long queue at the railway booking counters. Most significantly, one could do and all this on a 24/7/365 basis.

3.4 Even as we were marveling at the way internet changed our life styles, the increasing popularity of the Mobile Phone (I believe, the number of telecom subscribers in India has crossed the 500 million mark as on September 30, 2009) and developments in mobile technology brought to fore the potential of this ubiquitous instrument as a tool for conduct of business, including electronic money transfers and the terms "Mobile banking" and "Mobile commerce" acquired popularity. While e-commerce has skipped the majority of the population due to the cost of setting-up such channels, m-commerce has the capability to be inclusive due to the wide spread use of the mobile phones.

3.5 Recognising the importance of this mode Reserve Bank of India issued the guidelines for Mobile Banking Transactions in October 2008. The guidelines permit banks to provide mobile banking transactions and mandates that all transactions have to originate from one bank account and terminate in another bank account. These guidelines have been discussed in different fora and the perception in certain quarters has been that the guidelines are restrictive as they do not permit non-bank entities, especially the Mobile Service Providers to provide such services. The protagonists of this view often refer to the reported success of the M-PESA model adopted by Kenya and feel that the same could adopted or adapted in our country. They generally argue that a non-bank led model with appropriate regulatory mechanism in place would not only be as safe as a bank-led model but also enable greater penetration into under-banked and non-banked areas and thereby contribute to the financial inclusion process.

3.6 M-PESA is in effect a virtual prepaid payment product, allowing the mobile service provider to retain the pre-paid amount and permitting, inter alia, person to person remittance. A paper "*Poor People Using Mobile Financial Services: Observations on Customer Usage and Impact from M-PESA"* published by CGAP (Consultative Group to Assist the Poor) states that person-to-person transfer for maintenance of family dominates the use of M-PESA in Kenya. In comparison, mobile banking offers the facility of accessing banking products, which includes payments/remittances from bank account to bank account – either inter-bank or intra-bank.

3.7 Before embarking on the question of extending m-commerce facility, it is necessary to understand the risks. In this connection, I would like to refer to a paper submitted by the World Bank on the "Integrity in Mobile Financial Services" which identified four risk factors viz. anonymity, elusiveness, rapidity and poor oversight. Anonymity is the risk of not knowing a customer's actual identity. Elusiveness is the ability to disguise mobile transaction totals, origins and destinations. Rapidity is the speed with which illicit transactions can occur. Poor oversight identity refers to the level of regulation of service providers. Any model of mobile financial services needs to address to these issues

3.8 Firstly, let me admit that despite a wide network of bank branches spread across the length and breadth of the country, banking has still not reached a large section of the population. They are deprived of basic banking services like a savings account or minimal credit facilities. Banking penetration was not there because earlier technology was not available. But now, technology is available. Reserve Bank has taken measures to achieve increased financial inclusion though the "Banking Correspondent BC" model. The RBI also formulated a biometric access/smart card based scheme of Electronic Benefit Transfer (EBT) by banks to facilitate routing of social security benefits, National Rural Employment Guarantee Act payments and other government payments could be routed. The scheme, which involves subsidizing the cost of issue of the biometric access/smart cards by banks, was initially implemented in Andhra Pradesh in 2008 and has been extended across the country till June 30, 2010. I would also like to mention here that as per the annual report of India Post for the year 2008–09, there are over 1.55 lakh post offices in India, of which 89% are in the rural areas. And post offices offer money transfer services through their Money Order and Instant Money Order schemes. One of the important concerns in any money transfer transaction is the bonafide of the underlying. This concern is not restricted to India but felt across the globe.

3.9 The Know Your Customer (KYC) Guidelines/Anti Money Laundering (AML) guidelines have been well established in banks and appropriate mechanism is in place for reporting high value transactions to the Financial Intelligence Unit of the Government of India. The MSP led model would have concerns from the point of view of money laundering and the safety and security of the transactions. The customer identification processes followed in case of prepaid customers are lax as the MSPs consider this as low risk from their financial stand point. Given the large number of such cards being issued and the number of outlets through which they are issued, as a Regulator of the Payment and Settlement Systems in the country, it is difficult to contain the risk of anonymity in a MSP led model. Let me add here that the M-PESA model has the comfort of a National-ID scheme which is in existence in Kenya. Interestingly, as per the indications available on the UID Project, the team is veering round to the bank led model to further financial inclusion in India. Also, apart from KYC norms, MSPs would also have to enhance transparency in pricing and improve their infrastructure.

3.10 The advocates of a MSP-led mobile commerce list two advantages of the system, namely (i) leveraging the spread agent network (ii) transaction cost. The wide spread agent network is an attractive proposition for extending financial services. But does this require that the service is provided by the MSP only? I have already highlighted the availability of a large network of banks in the country. Cannot this agent network be utilized by banks in partnership with MSPs, for extending financial services? Keeping in view the concerns about money laundering and financial terrorism, we would prefer a partnership where the MSPs gain from the Over The Air (OTA) transaction volume and banks leveraging the channels for wider reach. There needs to be clear distinction of roles. Reserve Bank is exploring a better model across the world.

3.11 In this context two successful models of partnership between banks and MSPs observed are Wizzit in South Africa and G-Cash in Philippines. Wizzit Bank is a virtual bank which is a subsidiary of Bank of Athens in South Africa. It provides the unbanked population in SA with bank accounts on mobile phones which can be used to make person-to-person payments, transfers and pre-paid purchases. Besides, account holders are also provided a Maestro card for cash withdrawal. The MSPs supports this facility as carriers of such transaction instructions.

3.12 Philippines have been the pioneer in enabling financial services through use of mobile phones. The first product introduced in the country was SMART money – a partnership between, SMART telecom, Banco de Oro. Subsequently, G-cash a telecom led model was subsequently introduced by Globe Telecom. The country has seen the development of partnership between the mobile payment platforms provided and rural banks there.

4. Ownership of customers

4.1 The issue of partnership between banks and MSPs brings to fore the muted discussion Ownership of customers. The implementation of a successful mobile banking product requires seamless flow of payment instructions across mobile operators. The successful partnering of banks and MSPs would also need the resolution of the issue related to customer ownership. The discussion on mobile banking often leads to the issues of ownership of customers. The MSP's by virtue of being the owners of the mobile customer claim that mobile banking is only an Value added service (VAS) enabled by them. The banks claim ownership of the banking customer and feel mobile only being an additional access channel similar to internet.

5. Transaction charges

5.1 On the reported second advantage of low transaction charges, let me again quote from the CGAP report. A fund transfer of 1,000 Ksh (Kenyan Shilling) would cost the remitter 30 Ksh and the recipient 25 Ksh if the recipient is a registered customer and upto 75Ksh of the recipient if not a registered recipient. In comparison a bank to bank fund transfer of Rs 1 lakh in India using NEFT would cost only Rs. 5/– for the customers. The charges mandated by RBI make all account to account fund transfer models as the cheapest mode of remittance in India.

5.2 Information and Communication Technology based solutions hold the key in promoting financial inclusion in the country. Currently, number of projects using smart card solutions with biometric authentication have been implemented in the country. In such arrangements the account details and the transaction data are stored on the smart card held by the account holder. Agents of BCs, who are given hand held Point of Sale terminals are be approached by the customers for carrying out any transaction. Similar, solutions based on high end mobile phones have also been implemented. In this arrangement, all transaction data are held on the mobile phone. The customers are given only receipts of their transactions/account statements.

6. Financial inclusion

6.1 In this regard we recognize that mobile phone can be an important mode for propagation of financial inclusion in the country. The coverage of mobile phones and the use of such instruments by all section of the population can be exploited for extending financial services to the excluded populations. A comparison of the smart card based and mobile solutions would show that both technologies have their advantages. A mobile based product for extending financial inclusion would permit the customer to carryout transactions independent of agents of BCs. The agents would only be required for enrollment, cash deposit and cash withdrawal. Whereas, in a smart card based technology, the presence of an agent is required for initiation of all transactions.

6.2 The advantage of smart card is that, it can provide biometric authentication, which would help in reducing frauds and ensure identity of customers. Such cards can also hold all transaction details on the card. Further, the failure of transactions at POS would be less in comparison with the SMS based transactions.

7. Customer service

7.1 Banking is an activity of trust. This trust resides on the Capital, Liquidity requirements and the stringent regulatory and supervisory requirements. Therefore, dilution of these standards would not be possible. Any arrangement that the banks are permitted to enter into would have to address these issues. The customer service aspect also have to be given increased importance. This assumes importance as the failure rate in mobile transactions can be high. The report by CGAP states, failure to process transactions or transactions processed but confirmation not received due to congestion at peak texting times as a major source of dissatisfaction of customers of M-PESA. Resolution of such complaints takes long time to resolve by the agents due to high volume of such calls.

8. Issues faced by banks in providing mobile banking

8.1 One year has lapsed since the issuance of the guidelines by RBI. 32 banks have been given approval to provide mobile banking facility in India. Of this 21 banks have started providing these services. Yet we have not seen much activity in this area in India. The transaction volumes are very low. Let me highlight here some of the issues stated by banks for low uptake of mobile banking facilities.

(i) The requirement of end-to-end encryption makes implementation costly. They feel low ticket transactions do not require end-to-end encryption.

(ii) The transaction limits of Rs 5000/– and Rs 10,000/– needs to be revised upwards. Banks point out that these limits do not permit transactions like air lines ticket purchase etc.

8.2 These issues are being examined by RBI. Yet these questions raise the following concerns in our minds. Are the banks targeting only the customers who can book airline tickets or such large ticket transactions only? Mobile being a cheap mode for delivery which essentially facilitates low value transactions why are low value transactions not being facilitated?

8.3 Other issues stated by banks relate to the difficulties faced with Mobile Service Providers. Let me highlight some of these issues, the mobile service providers and TRAI would like to examine these.

I. Facilitation of mobile banking requires tie-ups with individual service providers for enabling such services. Banks face difficulties in entering into such partnerships.

II. MSPs do not open up channels for facilitating mobile banking services by banks. Opening up USSD *(Unstructured Supplementary Services Data)* channel for mobile banking and enabling the accessing of mobile banking facilities through all GPRS connections.

9. Role of non-banks in Indian payment scenario

9.1 The Payment and Settlements System Act, 2007, entrusts upon RBI, the responsibility for regulation and supervision of all payment and settlement systems in the country. Subsequent to the notification of the Act, we have permitted non-bank entities to issue prepaid payment instruments. The policy guidelines issued in April 2009 in this regard provide wide options for issuance of such pre-paid products. The amendment to the policy guidelines issued on August 14, 2009, permits all non-bank entities including MSPs to issue mobile based prepaid instruments. This relaxation was carried out based on the representation from MSPs. Yet, as of now only one MSP has applied for approval to provide such services. We are rather surprised at the lack of interest since the change was mandated based on representations from COAI. Are we to conclude that any model that does not provide a financial float does not interest MSPs? It will have to be recognized that MSP led model cannot also permit MSPs to enjoy the float funds. These funds remaining with non-banks are tantamount to deposit taking which needs to be discouraged.

10. Conclusion

10.1 The convenience of the mobile phone as an instrument for conduct of financial transactions and the immense potential it has in the process of financial inclusion and financial growth is well recognized. We all agree that the benefits of m-commerce should reach the common man at the remotest locations in the country. However, the extent and the manner in which m-commerce should be facilitated needs a cautious and well considered approach keeping in view the concerns on money laundering and financial terrorism and the stability of the payment and settlement systems. Further, any non bank service provider in the e payment cycle has to model his business based on fees and not on float. Funds management is best left to banks. While this is the policy has stood the test of time, RBI is not averse to any idea of revisiting this approach if this arrangement fails to meet the objective of total financial inclusion.

Thank you.