EMERGING TRENDS IN BANKING TECHNOLOGY FOR FINANCIAL INCLUSION IN INDIA

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Abstract

Technology is the key for financial inclusion because that is the only way to reduce the cost significantly and reach the masses. Financial Inclusion is delivery of basic banking services at an affordable cost to the vast sections of disadvantaged and low income groups. It includes access to formal financial system such as financial institutions, markets and instruments, like savings, loans, remittances and insurance services, at affordable prices. The study identified the major trends in banking technologies for achieving inclusive growth .Technology can play an important role in reducing operating cost of providing banking services, particularly in the rural and unbanked areas. ATM, Mobile banking, E-banking, core banking solutions, Debit card, Credit card, smart card and T-banking are the innovative and creative banking technologies which are introduced by the banks for including excluded people into formal financial system.These innovative technologies that could drive the growth in financial inclusion and help to achieving inclusive growth in the country.

Key words: Technology, financial inclusion, mobile banking, core banking, T-banking

INTRODUCTION

Financial inclusion means extending banking services at an affordable cost to the vast sections of disadvantaged and low-income groups. Banking system is the backbone of the economy and information technology in turn has become the backbone of banking activities. Technology, which plays a supportive role in banking, has come to fore front with the even increasing challenges and requirements. Banks cannot think of introducing a financial product without IT support. The banking scenario in the country in the post liberalization and deregulated environment has witnessed sweeping changes .Information technology has also improved the efficiency and robustness of business processes across banking sector. India’s banking sector has made rapid strides in reforming itself to the new competitive business environment. Indian banking industry is the midst of an IT revolution. Technological infrastructure has become an indispensable part of the reforms process in the banking system, with the gradual development of sophisticated instruments and innovations in market practices. Technologies such as debit and credit cards, telephone and internet banking, automatic teller machines (ATMs), and biometric point of transaction (POT) have been vital to such success. They enable remote accessibility to financial services and enhance security for associated transactions. This has extended and accelerated the Financial Inclusion drive.

Financial inclusion offers a huge potential for business in terms of resources and assets and banks therefore need to take aggressive steps to use technology, business processes and personnel to be able to exploit this potential in innovative and creative ways. The present paper focuses on the innovative and creative trends in banking technologies for achieving financial inclusion.

LITERATURE REVIEW

Dr. Kanhaiya Singh and Dr. U. S. Pandey (2011) focused on the way transformation is affecting the banking sector and the way use of IT products have changed the face of banking in India. It revealed that the current environment of the banking industry; the factors that have brought changes in the industry; and the way these changes have contributed to the development of banking.

Sanjeev Kumar Gupta (2011) highlighted the major steps which have been taken so far by the Reserve Bank and Government of India to enable financial inclusion for weaker sections of Indian society and discussed the role of Information and Communications Technology (ICT) with focus on Mobile Banking and finally the Unique Identification (UID) number.

Mihasonirina Andrianaivo and Kangni Kpodar (2011) studied the impact of information and communication technologies (ICT), especially mobile phone rollout, on economic growth in a sample of African countries from 1988 to 2007 and investigated whether financial inclusion is one of the channels through which mobile phone development influences economic growth.

OBJECTIVES OF THE STUDY

- To discuss about the conceptual aspects banking technology and financial inclusion
- To identify different innovative banking technologies for financial inclusion

METHODOLOGY

The data used in this study are secondary in nature. It is collected from different sources like published articles, journals, reports, books and websites.

FINANCIAL INCLUSION

Financial inclusion is the process of ensuring access to appropriate financial products and services needed by all section of society in general and vulnerable groups such as weaker sections and low income groups in particular, at an affordable cost and in a faire and transparent manner by regulated mainstream institutional players. It includes access to formal financial system such as financial institutions, markets and instruments, like savings, loans, remittances and insurance services, at affordable prices.

Definition

A committee on financial inclusion was formed under the chairmanship of C.Rangarajan and the committee defined as" The process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost"

BANKING TECHNOLOGY

Information technology is one of the most important facilitators for the transformation of the Indian banking industry in terms of its transactions processing as well as for various other internal systems and processes. The various technological platforms used by banks for the conduct of their day to day operations, their manner of reporting and the way in which interbank transactions and clearing is affected has evolved substantially over the years .The various innovative technologies are used by the banks to include excluded people in to formal financial system .These innovative technologies are explained below.

BANKING TECHNOLOGIES FOR FINANCIAL INCLUSION

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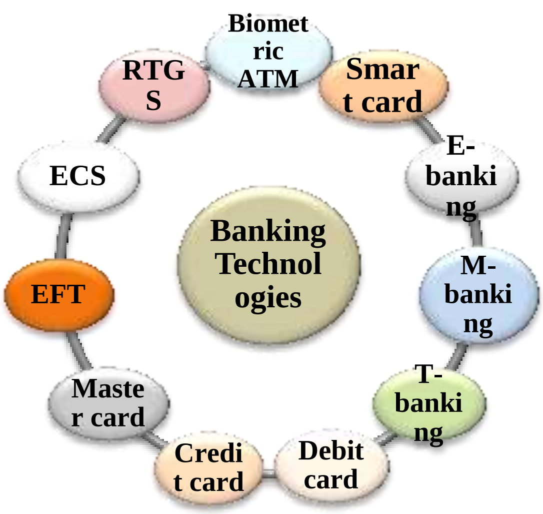

Automatic Teller Machine (ATM)

ATMs were introduced to the Indian banking industry in the early 1990s initiated by foreign banks. Automatic Teller Machine is the most popular devise in India, which enables the customers to withdraw their money 24 hours a day 7 days a week. It is a device that allows customer who has an Automatic Teller Machine (ATM) card to perform routine banking transactions without interacting with a human teller. Different types of ATMs are:-

Micro ATMs: The presence of ATMs mostly found in Metro/Urban centers and banks are not keen to install ATMs at Rural/Semi Urban centers on account of high investment and low transaction volume. In order to make the ATMs viable at these centers, there is a need to deploy low cost ATMs with basic features such as cash withdrawal and balance enquiry and should be located at places where rural folk pays frequent visits such as petrol pumps, mandis etc. It is convenient and cost effective compared to paying visit to the bank branch located at nearby center.

Biometric ATMs: The penetration of ATMs into Rural / Semi-urban areas may not serve the envisaged purpose unless it is put to use by illiterates/semi-literates whose presence is predominant in rural areas. The existing ATMs are not being used optimally by rural folk on account of PIN and Password related issues. Introduction of Biometric ATMs enables the illiterate and semi-literate customers to avail ATM facilities on par with literate customers. Under this, Thumb impression of the cardholder will be scanned and transfer the same to central server as one time measure. ATM dispenses cash and other services only after verifying the thumb impression of the cardholder with that of finger print available with the bank's server. Bio-metric ATMs are going to play an important role in the remote rural areas in the ensuing years.

Mobile ATMs are designed for providing ATM facility to the rural folk as well as other customers. The Van would move to the pre-determined places and also accessible to Biometric card holders. Opening of accounts also can be undertaken during the visits to the rural areas. This can be used at weekly shandis/markets effectively.

All the above initiatives warrant the banks to invest substantial amount on infrastructure besides recurring expenditure. The distribution of financial products and services at the lowest rung of the pyramid requires a low-cost model that allows accepting and making of a large number of micro payments to and from the poor. The high intermediary cost of the banks is a stumbling block to reach the poor, which need to be addressed. Hence, it is warranted the banks to search for the following alternate models to extend Branchless Banking across rural India.

Smart card: State Governments are actively looking at making pension payments as also disbursals under Rural Employment Generation Program using through smart cards linked bank accounts. Smart card provides biometric authentication, which would help in reducing frauds and ensure identity of customers. Such cards can also hold all transaction details on the card. In order to popularize smart cards, all agriculture short term loans and payment of social security schemes are to be dispensed through Smart Cards.

E-banking: E-banking is a result of the growing expectations of bank's customers-banking involves information technology based banking .E-Banking systems, which provide electronic delivery of banking products to customers, include automated teller machine (ATM) transactions, online account opening, internet banking transactions and telephone banking .It allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution, which can be a retail or virtual bank, credit union or building society.

Mobile banking: Also known as M-Banking. Mobile banking is a fairly recent phenomenon for the Indian banking industry. There exist operative guidelines and restrictions on the type and quantum of transactions that can be undertaken via this route. It is a term used for performing banking transactions through a mobile device such as mobile phone or a Personal Digital Assistant.

T-Banking: The presence of Television in all households is the order of the day and now it has become one of the most cost effective modes to disseminate information across the country. Banks may explore the possibility of making use of cable network to extend banking services to remote rural areas and this can be used as non-branch service delivery channel.

Debit cards: Debit cards are also known as check cards .Debit cards look like credit cards or ATM card but operate like cash or personal check. When using a debit card, money is quickly deducted from saving account

Credit card: A credit card is a plastic card that represents a line of credit. A line of credit is an account with money that you can borrow repeatedly. In most cases, this is not going to be your money. It is going to come from a credit card issuer. we will usually have more than one issuer for a single card. Account will be assigned a certain limit based on the information from application. Then customer can swipe card as needed to spend money out of it.

Electronic Payment Services -E Cheques: Nowadays we are hearing about e-governance, e-mail, e-commerce, e-tail etc. In the same manner, a new technology is being developed in US for introduction of e-cheque, which will eventually replace the conventional paper cheque. India, as harbinger to the introduction of e-cheque, the Negotiable Instruments Act has already been amended to include; Truncated cheque and E-cheque instruments.

Aadhaar Enabled Payments System :Aadhaar Enabled Payments System (AEPS) is a bank led model which allows online interoperable financial inclusion transactions at PoS (Micro ATM) through the Business Correspondent of any bank using the Aadhaar authentication. At present there are 18 member banks which are in production. AEPS allows balance inquiry, cash withdrawal, cash deposit and Aadhaar to Aadhaar funds transfer

Electronic Fund Transfer: The Reserve Bank of India introduced an electronic funds system called National Electronic Funds Transfer System to facilitate an efficient , secure ,economical, reliable and expeditious system of funds transfer and clearing in the banking sector throughout India. It is a system under which computers and electronic technology is used as the substitute for cheque and other paper transaction. Electronic Funds Transfer (EFT) is a system whereby anyone who wants to make payment to another person/company etc. can approach his bank and make cash payment or give instructions/authorization to transfer funds directly from his own account to the bank account of the receiver/beneficiary.

Electronic Clearing Service: The Electronic Clearing Service (ECS) introduced by the RBI in 1995, is akin to the Automated Clearing House system that is operational in certain other countries like the US. ECS has two variants- ECS debit clearing and ECS credit clearing service. ECS credit clearing operates on the principle of 'single debit multiple credits' and is used for transactions like payment of salary, dividend, pension, interest etc. ECS debit clearing service operates on the principle of 'single credit multiple debits' and is used by utility service providers for collection of electricity bills, telephone bills and other charges and also by banks for collections of principal and interest repayments. Settlement under ECS is undertaken on T+1 basis. Any ECS user can undertake the transactions by registering themselves with an approved clearing house.

The RBI has recently launched the National Electronic Clearing Service

(NECS), in September 2008, which is an improvement over the ECS currently operational. Under NECS, all transactions shall be processed at a centralized location called the National Clearing Cell, located in Mumbai, as against the ECS, where processing is currently done at 74 different locations.. As on September 2008, 25000 branches of 50 banks participate in the NECS. Leveraging on the core banking system, NECS is expected to bring more efficiency into the system.

Real Time Gross settlement (RTGS):

Real Time Gross Settlement system, introduced in India since March 2004, is a Interlink Research Analysis system through which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. RTGS was launched by RBI, which enabled a real time settlement on a gross basis. To ensure that RTGS system is used only for large value transactions and retail transactions take an alternate channel of electronic funds transfer, a minimum threshold of one lakh rupees was prescribed for customer transactions under RTGS on January 1, 2007.

CONCLUSION

Technology has brought a complete paradigm shift in the functioning of banks and delivery of banking services .The banking industry is going through a period of rapid change to meet competition, challenges of technology and the demands of the end users .Clearly technology is a key differentiator in the performance of banks. Technology can play an important role in reducing operating cost of providing banking services, particularly in the rural and unbanked areas. ATM, Mobile banking, E-banking, core banking solutions, Debit card, Credit card, smart card and T-banking are the innovative and creative banking technologies which are introduced by the banks for including excluded people into formal financial system. Indian banks need to focus on swift and continued infusion of technology while ensuring its appropriateness and utility for both the rural and urban market..

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