International Journal of Business and General Management (IJBGM)
ISSN(P): 2319-2267; ISSN(E): 2319-2275
Vol. 6, Issue 5, Aug- Sep 2017; 1-6

International Academy of Science, Engineering and Technology
Connecting Researchers; Nurturing Innovations

ROLE OF TECHNOLOGY IN FINANCIAL INCLUSION

ALKA SINGH

Associate Professor, Shri Ramswaroop Memorial University, Lucknow, Uttar Pradesh, India

ABSTRACT

Financial inclusion has gained a great importance these days; it is to provide with basic banking services to the unbanked population. The present government of India has taken a giant leap towards financial Inclusion by the introduction of Pradhan Mantri Jan DhanYojna. Technology is a major enabler in the process of providing banking services to the needs of a larger section of society, with special emphasis on the under-privileged communities. The technological advancements need to support this initiative of government by extending banking services to the unbanked population and the available technology, along with the impetus by the government in ensuring banking system to deploy cost effective technology to transform the financial ecosystem in India.

KEYWORDS: Financial Inclusion, Banking, Technology

INTRODUCTION

The major initiative of Financial Inclusion by the present government by launching "Pradhan Mantri Jan-DhanYojana (PMJDY)" is to ensure access to various financial services like availability of basic savings bank account, access to need based credit, remittance facility, insurance and pension to the unbanked population or the weaker sections or low income groups of the society. This penetration achieved or as envisaged at an affordable cost is possible, only with the implementation and effective use of technology. Financial Inclusion encompasses an integrated approach to bring about the comprehensive financial inclusion of all the households in the country. The scheme is aimed at universal access to banking facilities with at least one basic bank account to every household, financial literacy, access to credit, insurance and pension facility and benefits of the social security schemes planned and implemented by the government time to time. With implementation of financial inclusion, the government envisages channeling all benefits of the social security schemes to the beneficiaries' accounts directly, and pushing the Direct Benefits Transfer (DBT) scheme of the Union Government. The technological issues like poor connectivity, on-line transactions will be addressed. Mobile transactions and mobile banking through telecom operators are to be used for financial inclusion under the Scheme.

ROLE OF TECHNOLOGY IN FINANCIAL INCLUSION

Banking services and Technology are the main pillars for successful implementation of financial inclusion in the country. The main hurdle in financial inclusion so far has been managing large numbers of accounts to be opened, remote locations and low volumes, translating into a reach ability and financial inability. If the overall cost of the effort of reaching to the unbanked population at keeping within reasonable levels to extend the reach to the farthest / remotest corner of the country is, by effectively utilizing the available technology. In order to make available the banking facilities across the length and breadth of the country, latest technology products like e-KYC, IMPS, AEPS, mobile banking, etc. have the potential to emerge as a game changer in terms of costs, convenience, and speed of reach. The role of all the stakeholders, including business models of banks and telecom operators needs to converge. Various agencies like National

Payments Corporation of India (NPCI), Institute for Development & Research in Banking Technology (IDRBT) etc. are participating actively and contributing towards the success of the scheme by means of bringing new technology based products for implementation.

RBI has very actively been involved in harnessing technology for the extending reach of the banking sector. The breakthrough due to technological development in the functioning of the banking sector has been the introduction and implementation of Core Banking Solutions (CBS). CBS was the initial step towards enhancing not only backed processing, but also improving the front-end services and enhancing customer convenience through, anywhere, Anytime Banking.

The technological advancement was then focused towards further beyond CBS in order to ease out banking and offer quality, effective and efficient services to customers as well as improving the banking operations further but also generating and managing information effectively. The introduction of CBS enabled various products like NEFT, RTGS, mobile banking, Internet Banking, ATMs, etc. The introduction of technological advancement in banking made significant changes in increasing the reach of the banking sector of the masses. The innovations in the banking sector, which led outreach of banks to the masses, are as under:

- Adopting CBS by the Banks, including all Regional Rural Banks (RRBs).
- Multi-channel branchless approach using handheld devices, mobiles, cards, micro-ATMs and kiosks can be used.
- Transactions put through such front-end devices are seamlessly integrated with the banks' CBS.
- Implementation of the electronic payment system such as RTGS (Real Time Gross Settlement).
- Electronic Clearing Service (ECS).
- Electronic Funds Transfer (NEFT).
- Cheque Truncation System (CTS).
- Banking transaction by using Mobile phones etc.

The actions undertaken for implementation of PMJDY as part of the National Mission on Financial Inclusion are to utilize available technology to the fullest and in a big way to achieve the goal in a time bound manner. Some of the major products/solutions are appended hereunder:

E-KYC

Electronically, Know Your Customer (e-KYC) was introduced in the year 2013, as RBI permitted it under the Prevention of Money Laundering (Maintenance of Records) Rules, 2005 to reduce the risk of identity fraud, document forgery and paperless KYC verification. Under this explicit consent of the customer and after his or her biometric authentication from UIDAI data base individual basic data comprising name, age, gender and photograph can be shared electronically with authorized Users like Banks, which is a valid process for KYC. The electronic form of data available through Aadhar made opening of bank account easier and all banks adopted it.

Mobile Banking

The mobile revolution in India has made more than 890 million users spread all over the nation even in the remote corners. The mobile-phone revolution that is changing the country has been tapped by the banking sector to

revolutionize banking in terms of reach and ease of transaction. The reach of mobile to the remote village and its usage by the common man has become the order of the day, and almost more than 30% of the users estimated to be residing in villages/small towns. The extensive coverage of mobile phones and the use of such media by all sections of the population can be exploited for extending financial services to the unbanked populations. It enables the customer to manage their financial transactions independent of place and time with so much of flexibility. The Mobile Banking services are generally available through mobile applications installed on smart mobile phones operating on various platforms, i.e. android, ios etc. The banking services like account access, Funds Transfer, Immediate Payment Services, Enquiry Services (Balance enquiry/ Mini statement), Demat Account Services, Requests for Cheque Book, Bill Payments, etc. can be carried out through mobile banking platform. The mobile banking services are free of charges and are very much encouraged by the banks as it eases out there working. The mobile banking services are also available for simpler mobile not having smart phone features as the transactions can be done through SMS as well. The basic financial transactions from the Bank accounts can be executed through a mobile based PIN system using "Mobile Banking". Mobile banking through mobile wallet was also launched in 2012.

Immediate Payment System (IMPS)

An IMP was introduced by NPCI in the year 2010. It offers an instant, 24X7, interbank electronic fund transfer service through mobile phones as well as internet banking & ATMs. The sender uses mobile banking to send money, the receiver mobile number should be registered with his bank, and the money is credited to receivers' account instantly. For registration, the Remitter must register for mobile banking and get Mobile

Money Identifier (MMID) & Mobile Banking PIN (MPIN) is for initiation of a transaction. MMID is a 7 digit number, issued to the customer by the bank while registering. The transaction can be initiated by sending an SMS. Payments Corporation of India (NPCI) is facilitating the Interbank Mobile Payment Service (IMPS).

Micro-ATMs

Micro-ATMs are handheld devices having biometric authentication enabled for financial transactions. In order to make the ATMs viable at rural / semi-urban centers, low cost Micro-ATMs have been used by each of the Bank Mitra locations. This has enabled a person holding it to instantly deposit or withdraw funds, regardless of the bank associated with a particular Bank Mitra / Business Correspondent. Micro-ATM operates using Mobile phone connection, and has been made available to every Bank Mitra / Business Correspondent. Customers only get their identity authenticated through biometric signature through the customer's UID and withdraw or put money into their bank accounts. The money is delivered through the cash drawer of the Bank Mitra / Business Correspondent. The basic transaction types, which are supported by micro ATM, are Deposit, Withdrawal, Fund transfer and Balance enquiry. Micro-ATM offers one of the most versatile and promising options for providing financial services to the unbanked population. Micro-ATMs have various options for authentication like biometric, PIN based etc. and it is also being used as mobile ATMs to enable transactions near the door step of the customers. The Micro-ATMs offer an online, interoperable, low-cost payments platform to everyone in the country.

National Unified USSD Platform (NUUP)

Although mobile banking is one of the most potent modes for increasing the reach of banking facilities to the masses as nowadays, mobile phones have become a one of the most common devices in each household in India. As the

majority of the mobile users is using mobile applications for banking purpose where the application needs to be downloaded and then installed onto mobile. But, less than 40% users in India have a J2ME compatible mobile handset and data connection on their mobiles which is needed. To resolve these issues, an alternative solution on USSD platform is available. USSD solution for mobile device does not require any application to be downloaded on the customer's mobile phone and data connectivity. USSD is user friendly, easy to communicate and educate customers as well. USSD alleviates the need for application download and is more secure as compared to SMS. Banking customers can use this service by dialing *99#, a "Common number across all Telecom Service, Providers, (TSPs)", on their mobile and transact through an interactive menu displayed on the mobile screen. The customer can access both financial services like fund transfer as well as nonfinancial services like balance enquiry and mini statement of bank account, at his/her own convenience. NUUP also offers interbank account to account funds transfer, balance enquiry, mini statement besides a host of other services. A notable inclusion in the NUUP service is a new addition in the form of Query Service on Aadhaar Mapper (QSAM). With this special feature, a user can know about his/her AADHAAR seeding status with the banks, a service that will find incredible value for the government's direct subsidy disbursal plans.

Rupay Debit Cards

As part of the financial inclusion initiative, a new card payment scheme was launched by the National Payments Corporation of India (NPCI), to offer a domestic, open-loop; multilateral system enabled all Indian banks and financial institutions in India to participate in electronic payments. "RuPay" is the coinage of two terms Rupee and Payment. RuPay Cards are addressing the needs of all elements like Indian consumers, merchants and banks. The major advantages of RuPay debit card are the high levels of acceptance, flexibility of the product platform and the brand value itself. The main features are as under:

- Lower cost and affordability.
- Customized product offering.
- Protection of information related to Indian consumers.
- Provides electronic product options to untapped/unexplored consumer segment.

Aadhaar Enabled Payment System (AEPS)

A banking product, which permits online, interoperable financial inclusion transaction at PoS (Micro-ATM) or Kiosk Banking, through the Business Correspondent of any bank. It utilizes UID (Aadhaar) authentication, and the four banking transactions available with it are basically Balance Enquiry, Cash Withdrawal, Cash Deposit & Aadhaar to Aadhaar Funds Transfer. Inputs which are needed for transactions by customer are IIN (Identifying the Bank to which the customer is associated) & Aadhaar Number.

Aadhaar Payments Bridge System (APBS)

This system enables the transfer of payments from Government and Government Institutions to Aadhaar-enabled accounts of beneficiaries at banks and post offices. Every Government Department or Institution that sends EBT and DBT/DBTL payments to individuals simply needs to prepare a file containing the Aadhaar number and amount and submit it to their accredited bank. The attributed bank then processes the file through an interoperable Aadhaar Payments bridge

and funds are credited into the accounts of beneficiaries. Upon receiving incoming funds, the beneficiary's bank notifies through an SMS or any appropriate communication channel.

NEED FOR INVESTMENT IN TECHNOLOGY

Technology has brought a complete paradigm shift in the functioning of banks and delivery of banking services. Banks need to continue investment in technology solutions that ensure ceaseless delivery of banking services to the rural population as its not economically viable for banks to provide banking services to the unbanked by opening physical branches, especially in the backward and rural areas where there are a total lack of basic services. To enable the bank to reach the remotest place and to achieve complete financial inclusion the banks had to increase adoption of branchless banking services, i.e., opening of bank account, cash deposit, cash withdrawal through a BC model. To gain reliability and success, the banks need to invest in technology solutions and IT infrastructure.

KEY ROLE IN SUCCESS OF FINANCIAL INCLUSION: TECHNOLOGY

Technology is a major enabler in the process of providing banking services to the needs of a larger section of society, with special emphasis on the under-privileged communities. The success of financial inclusion is dependent on the reach ability of the banking services to the unbanked and it is the ability to deploy cost effective technology to transform the financial ecosystem in India. In order to reach the unbanked population in the rural hinterland, there is a pressing need of an enabling technology framework that accelerates the movement of financial inclusion. Further, there is a need to align technology solutions to ensure that the delivery of financial services is undertaken in a transparent, righteous and equitable manner at an economical cost. It is the potential of technology to provide doorstep service to the consumers.

CHALLENGES: TECHNOLOGY

Major challenges with reference to technology adoption are lack of last mile connectivity, financial and technology illiteracy, lack of technology adoption, etc. Technology has helped enable Multi-channel branchless banking through E-KYC, transaction through mobile banking, IMPS (immediate payment system), Micro ATM’s, National Unified (USSD platform), RuPay debit cards and Aadhar payment bridge system. The challenge now lies in taking greater advantage of new technologies and effective implementation of the same to expand the coverage of the banking and financial system. Thus, technology based solutions would go a long way to achieving greater financial inclusion.

CONCLUSIONS

Financial inclusion has been the initiative of the government to extend the basic financial services to all, including unbanked populations residing in the remote locations of the country. Technology is an enabler in implementation of the financial inclusion initiative and various services being implemented by various agencies is aimed at extending banking services to all that to economically. The banks and financial establishments needs to invest in technology to enable delivery of financial services in a transparent, righteous and equitable manner, and the problem area in the implementation of technological solution needs to be addressed as well for its effectiveness.

REFERENCES

1. Dr. Alka Singh, "Financial Inclusion & Implementation of Jan DhanYojna – Information Technology as Enabler", International Journal of Scientific Research and Management (IJSRM), https://www.ijsrm.in, Volume 5 Issue 7, July 2017, 5813-5918, DOI: 10.18535/ijsrm/v5i7. 16.
2. S. Garg, and P. Agarwal, "Financial Inclusion in India–a Review of Initiatives and Achievements", Journal of Business and Management (IOSR-JBM), 16, 2014.
3. Sanjeev Kumar Gupta, "Financial Inclusion - IT as enabler", Reserve Bank of India Occasional Papers Vol. 32, No. 2, Monsoon 2011.
4. http://www.rbi.org.
5. http://www.mof.gov.in.
6. Satya Narayan Singh, Om Prakash Dubey, Kusum Deep, Ajay Prasad, "Role of Information Technology in Financial Inclusion", DOI: 10.1007/978-81-322-1771-8_43.
7. http://pmjandhanyojana.co.in.