

Winning by Banking on Technology and Innovations: A Study of Select Indian Banks

Srihari Subudhi

Ph.D. Scholar, All India Management Association, New Delhi
Senior Manager (IT), Oriental Bank of Commerce, Head Office, New Delhi
Email: sriharisubudhi@gmail.com

ABSTRACT

Advances in information and communication technologies have transformed the way banks do their businesses. All the banks in India are now reaping the benefits of Core Banking Solutions (CBS), thereby providing their valued customers anywhere banking, National Electronic Funds Transfer (NEFT), Real-Time Gross-Settlement (RTGS), Phone Banking, Internet Banking, Mobile Banking, Cheque Truncation System (CTS) etc. Technology-enabled disruptive business models, progressive regulatory environment and changing customer needs are forcing the banks to be innovative. This study tries to find out the various innovative banking products/services recently introduced by select banks in India. This study also examines how banks can win in offering innovative products/services in the future by leveraging various technologies. In this study, for secondary data, we have referred various Reports/Research Papers/Web sites of Reserve Bank of India, Institute for Development and Research in Banking Technology (IDRBT), Unique Identity Authority of India (UIDAI), various banks etc. The paper reveals that apart from having a large branch network, ATMs, POS Terminals, micro-ATMs and Business Correspondents, banks in India have recently introduced various innovative products/services like TV Banking, Facebook Banking and Self-Banking, Tab Banking and Video Banking, etc. The leaders in banking on technology and innovations are SBI among the public sector banks and ICICI Bank among the private sector banks. India's Unique ID card (Aadhaar Card) based biometric authentication can be a real game changer for the banking sector in the future. Banks having a solid technology platform coupled with innovations can go a long way in winning in the future.

Keywords: Innovation, Technology, Indian Banks, ICT

"Knowledge drives innovation, innovation drives productivity, productivity drives our economic growth". -William Brody

INTRODUCTION

Innovation distinguishes between a leader and a follower. - Steve Jobs

The Indian banking industry has evolved rapidly during the last two

decades. Advances in information and communication technologies have transformed the way banks do their businesses. Almost all banks in India have

been using high-end technology platforms to deliver world-class banking products and services to their esteemed customers. Now all banks, both private sector banks as well as public sector banks, provide banking services like Real-Time Gross Settlement (RTGS) for large value fund transfer and National Electronic Fund Transfer (NEFT) for fund transfer, Electronic Clearing Service (ECS) Debit and Credit for multiple payments, Cheque Truncation System (CTS) for faster cheque clearing service, Phone Banking/call centre, Internet Banking, Mobile Banking etc. Apart from these services, some banks also provide innovative products/services such as Tab Banking, Facebook Banking, Video Banking/Branch, Cardless Cash Withdrawal from ATMs, e-Locker etc.

With the innovative services offered by various banks the customer has a number of options with him to do banking as convenient to him. Take for example, today a bank customer in India can get his account balance by any of the following methods (subject to respective bank offering the service):

1. By going to the Branch (Brick and Mortar) & asking over the inquiry counter
2. By sending an sms from his registered mobile number (in a prescribed format to a given number)
3. By Phone Banking – IVRS System
4. By Phone Banking – Talking to an executive
5. By Internet Banking
6. By Mobile Banking (Through Mobile Banking App)
7. By Mobile Banking - USSD Service (*99# from his registered mobile)
8. By giving a missed call to a particular number (Missed Call Banking Service) from registered mobile number
9. By using ATM/Mobile ATM/Branch on Wheels
10. By Making a Video Call to his Bank (Video Branch)/Video Conferencing
11. Recently some banks have started offering Missed Call Banking service, wherein a bank customer can get the balance of his bank account by just giving a missed call from his/her registered mobile to a predefined mobile/landline phone number of the bank.

BENEFITS OF TECHNOLOGY IN BANKS

The use of technology in banks have not only helped banks in improving operational efficiency, transparency, speed and accuracy in banking transactions, it has also helped all other stake-holders like customers, the regulator and the Government. Customers benefit by getting a number of options to access their bank accounts across a number of delivery channels to suit his requirement. The Regulator gets the benefit of better monitoring through faster reporting by the banks through automated data flow and/

or use of E-mail/Internet etc. Government gets the benefits of faster collection of various direct and indirect taxes across the country and better tracking of large value transactions. The Government is able to make the payments to the beneficiaries directly in their bank accounts under various social welfare schemes. Businesses get the benefit of faster realisation of their receivables from their clients & faster payment to their suppliers.

OBJECTIVES OF THE STUDY

1. To appreciate the various innovative banking products/services being offered by the banks in India.
2. To find out the leaders in banking innovations among public sector banks and private sector banks in India.
3. To examine the various technologies that can help banks in offering various innovative banking products/services in the future.

RESEARCH METHODOLOGY

For this study, we have extensively referred various Reports/Research Papers/ Web sites of Reserve Bank of India, Institute for Development and Research in Banking Technology (IDRBT), Unique Identity Authority of India (UIDAI), Indian Banks Association (IBA), Indian Institute of Banking and Finance, various banks in India, and various social media sites like Facebook, YouTube, Twitter etc.

The primary data was collected from 50 bankers and bank customers from

both public sector banks and private sector banks through structured telephonic interview. Bankers and customers were selected through convenience sampling from ICICI Bank, IndusInd Bank, State Bank of India, Union Bank of India and Oriental Bank of Commerce. The interviews were conducted during Sep. 2014.

The Bankers and bank customers were asked questions on the various innovative products/services they offer/use (as applicable), whether the customer experience with the banks services with respect to such innovative products/services is good enough, whether the customers are happy with so many options of accessing their bank accounts from the banks, whether customers are afraid of various online frauds/skimming/hacking etc. whether there is enough awareness among the customers about the various product/services their banks offer, whether they follow their banks on social media sites, what customers expect from their banks on social media and how banks can further improve their customer service, whether Aadhaar (Unique ID) can provide more opportunities for banks to innovate etc.

LETERATURE REVIEW

Internet and mobile penetration in India in the last few years have led to a shift in the consumer behaviour towards online tools and products and service delivery preferences. The banking sector has been no exception to this. Customers started looking for options for “transacting

and interacting” for their banking needs beyond conventional branches. Simple, Effortless & Convenient banking became the theme and it was evident that Banks, which leveraged technology to provide innovative products/services, would have a competitive advantage. Sensing the changing market dynamics and the shift towards online banking usage across all segments, the banks capitalized on the opportunity of providing a unique service to their customers by launching various innovative products and services, specially using the platform of Internet, Mobile, ATM, Social Media etc.

According to Dr. Raghuram Rajan (2014), technology, with its capacity to reduce transaction costs, is key to enabling the large volume low ticket transaction that is at the centre of financial inclusion. By collecting and processing large volumes of data easily, technology can also improve the quality of financial decision making.

India has been known for its technology and process innovations in the area of Information Technology, particularly Application Software Development. The well known Banking applications like Finacle from Infosys Ltd, Flexcube from Oracle and BaNCS from TCS are some of the good examples of India’s capability in the application software development. Time and again, India has proved to be a hub for various innovations.

In his study Raghavan R S (2006) noted “Technology has played a vital role

in the evolution of banking sector, through speed creation, accuracy and efficiency of operation and reduction in the transaction cost. Banking services are now oriented to “anyhow, anywhere, anytime and any type” banking”.

Sreelatha, T and Sekhar C (2012) observed in their study that the banks were quickly responded to the changes in the industry; especially the new generation banks. The continuance of the trend has re-defined and re-engineered the banking operations as whole with more customization through leveraging technology. As technology makes banking convenient, customers can access banking services and do banking transactions any time and from any ware.

In his study, Pearson, M (2012) pointed out that the capabilities of Internet technology are somewhat in advance of what most banks have been able to implement in their online banking to date. It is also the case that a number of features need to be brought together with efficient back office processes to create an exceptional customer experience, so it is not sufficient just to add one or two features.

Harish V (2014) in his study argues that Information Technology (IT) has revolutionized the entire banking business spectrum and banking is no exception. IT can be suitably used in brick/mortal as well as virtual set up. IT has in short become the lifeline of banking.

Banking is just mobilising surplus funds and lending to the needy borrowers. Technology has changed the very concept of banking in terms of its scope, structure and the size of various banks in India. The Banks which could implement robust core banking solutions grew in size and business very rapidly. Union Bank of India with appropriate technology coupled with innovation has enabled it to grow from small bank to large bank within few years.

The technology landscape is undergoing unprecedented changes and the customers are embracing a range of technology options such as mobility, Internet and social media at a rapid pace. What took the Internet 15 years to do, mobile only took 5 years. Financial services are no exception. Gradually banks offer very innovative products/services based on Internet, Mobile and Social Media. Some of the greatest innovations in the Banking Sector in India as offered by various banks can be discussed as follows:

Innovative Banking Products/ Services by Banks in India - In recent years banks in India have launched many innovative banking products and services such as Tab Banking, Facebook Banking, TV Banking, Self-Banking, Cardless Aash Withdrawal from ATM, Video Branch, e-Locker etc. These innovative products/services have been mostly conceptualised by the new generation private sector banks and subsequently followed by the public sector banks.

Tab Banking:

Banks offer its valued customers the facility of opening accounts at their door step through Tab Banking. The sales staff of the banks visit the customers at their home and using the tablets get the formalities completed for account opening like details of KYC and photographs of the applicant(s). The data from the Tablet are uploaded to Bank's core banking system in real time. Bank's Tab Banking provides the convenience and time saving to the customers for opening accounts. Presently ICICI Bank, SBI, Union Bank of India offer Tab Banking in India. It is Tab banking that brings the Bank to the home of the customer. It is something like banking services home delivered! ICICI Bank has opened half a million accounts in about eight months through Tab Banking, says a press release by the Bank.

TV Banking

"A bank in every home", goes the tagline of ICICI Bank TV Banking. Since the majority of Indian households have a TV set, and with the DTH revolution, more and more Indians are jumping on to the bandwagon. ICICI Bank leveraged this fact to deliver financial services to a wider audience. Even in places where it is difficult to set up a branch. With the intention of giving banking access to every home, ICICI Bank launched this first-of-its-kind 24-hour initiative that enabled customers to browse through information on various banking products, learn about regulations, guidelines, eligibility criteria etc. and make an informed decision while banking.

Customers could also learn about loans, accounts, deposits and even access calculators for loans using their remote controls. This has greatly impacted the lives of several Indians, as it brings banking into their living rooms; it makes it very convenient for people to make informed decisions without having to visit a branch. TV Banking service is currently available on satellite DTH platforms like Dish TV and IPTV platforms like My Way.

Cardless Cash Withdrawal from ATM

Cardless Cash Withdrawal from ATM is a simple and safe mode for the Bank customers to send cash, 24x7, to any mobile number in India. All the bank customer needs need is to login to bank's Internet banking with his/her Internet Banking user ID and password and initiate a Cardless Cash Withdrawal transaction. The recipient need not have any bank account and can withdraw cash from any ATM of the respective bank across India, without any ATM card, using the details received through SMS. Such service is being offered by ICICI bank, IndusInd Bank, Bank of India etc. In case of IndusInd Bank, the service is called "Cash-on-Mobile", in which Customers can initiate a Cash-on-Mobile transaction from either select IndusInd Bank ATMs or through the IndusMobile Application.

Advantages of Cardless Cash Withdrawal from ATM -

- 24X7 service to send and withdraw cash, anywhere in India
- The recipient need not hold a bank account
- Safe and secure mode of cash transfer using Internet Banking
- Obtain the cash instantly without any ATM card
- Innovative application of Internet Banking, ATM and Mobile Phone

Facebook Banking

Facebook Banking, called Pockets by ICICI Bank, offers its customers the convenience of banking on Facebook and smart phones. The first-of-its kind app uses Facebook credentials to log into your account on Facebook and mobile to make banking fun and social. Through Facebook banking, icici bank customers can do the following:

1. To see summary of all accounts (deposit/loan/credit card/demat etc.)
2. Balance Check and last 10 transactions
3. To view Credit Card statement and other details
4. To apply for Fixed Deposit or Recurring Deposit
5. To apply for new cheque book
6. To stop cheque payment
7. To Pay utility bills
8. Transfer funds to linked accounts
9. To apply for e-statement
10. To transfer funds to friend's account in icici bank

Account Number of Customer's Choice

Offered by IndusInd Bank under name "My Account My Number". Here the customer has the freedom to choose the number of his/her choice for the account he/she opens in IndusInd bank. The chosen account number may be a specific pattern, a lucky number, date of Birth etc., a favourite combination or just something simple to remember like 12345678910, etc. !

Video Branch

This innovative offering enables the customers to do a video conference with the bank staff. Customers can schedule a Video call with the Branch Managers/ Relationship Managers or Branch instantly. This is to interact with the Video Branch at their own convenience either from his desktop/laptop computers or Apple and Android smart phones on 24x7 basis. IndusInd Bank Video Branch is yet another new service under the Bank's theme of Responsive Innovation to offer innovative and unique banking experience to all customers, while keeping the convenience in mind. Customers can enjoy all the banking services which are offered on the IndusInd Bank Phone Banking and additionally, perform transactions, from anywhere in the world, like opening a Fixed Deposit or Recurring Deposit, transferring funds through NEFT, RTGS.

This service is made available for all Android (2.3 and higher) and Apple mobile devices (iOS 6, 7 and higher).

Similar service is also offered by ICICI bank (E-Branch) and SBI (InTouch) under different names from their self-service banking halls.

Check on Cheque

IndusInd Bank offers this service in which a customer can keep a record of all the issued cheques. Customers can get access to copies of their cheques on statements or through IndusNet – Internet Banking, never to lose track of the cheques.

Denomination Selection in ATM

Customers (of any bank) can choose the denomination(s) of Cash Withdrawal from a mix of 100, 500 & 1000 rupee denomination from IndusInd Bank ATMs. This service is being offered only by IndusInd Bank.

Direct Connect

Jump the queue!!! With IndusInd Banks Direct Connect service customers can directly speak to a bank executive directly without having to go through an IVR (Interactive Voice Response). Hence no waiting or choosing of any options needs to be done by customers. All a customer needs to do is to call the Bank's phone banking from his registered mobile number.

Micro-ATM

It is not an ATM. Micro-ATM is a POS Terminal with fingerprint scanner. Micro-ATMs are widely used by business correspondents (BCs) appointed by the

banks to provide banking service in remote areas as a part of financial inclusion measure. A micro-ATM with biometric authentication through Aadhaar is a big innovation to provide banking service in unbanked remote areas in India.

SBI InTouch

SBI aims to transform the customer experience by delivering world-class service through all of its customer channels. Its new branches, branded as sbiINTOUCH, are equipped with interactive wall and table displays; remote experts that can be reached instantly via high-definition videoconferencing; and multi-function kiosks that provide services such as instant account opening with personalized debit cards, and instant in-principle approvals for home, auto or education loans.

Self Banking Service

ICICI E-Branched/SBI e-Corner/OBC e-longue/Bank of India e-Gallery, etc:

Essentially these are banking terminals, which will do away with full service staff and provide customers with facilities such as ATM, cheque deposit machines, cash deposit machines with instant credit, Passbook printing etc.

E-Locker from ICICI bank

ICICI Bank's E-Locker is a virtual online locker which is available on the ICICI Bank internet banking

platform. The E-Locker can be used to safely store electronically scanned copies of important documents like legal agreements, policy documents, degree certificates and bank statements in various formats. The facility serves as a backup and retrieval tool for important documents and offers a storage space of 1 GB per customer. The E-Locker can be availed at no additional cost by wealth customers.

ICICI Bank's Unifare Card

ICICI bank has recently launched, in collaboration with Delhi Metro Rail Corporation (DMRC) a "Unifare Card" which acts as the Delhi Metro Card along with ICICI Bank's Debit Card or Credit Card. Whenever the balance of Delhi Metro card goes beyond a predefined limit (say, Rs. 200), then it gets recharged automatically from the Debit Card or Credit Card.

MAJOR FINDINGS & DISCUSSIONS

Banks offer various technology enabled products and services on platforms of Internet, Mobile and social media, which are very widely used by the bank customers, particularly the young customers. With the growing number of delivery channels, the cases of frauds like involving Internet Banking, mobile banking, Debit/Credit cards etc. are also rising. Aadhaar (India's Unique Identity Card Project) can prove to a game-changer for the banking industry. At present many banks, NBFCs and Insurance Companies etc are accepting e-KYC (Know-Your-

Customers)- a service offered by Centralised Aadhaar Repository of Unique Identity Authority of India. Since Aadhaar has the capability to establish one's identity that he claims to be; based on his Aadhaar no (alternately his mobile number or bank account number or Debit Card number etc.) along with his/her fingerprint or retina for online authentication, it will provide a huge opportunity for banks as well as the Government for e-Governance initiatives. Not only Banks in India, even India herself can bank on Aadhaar authentication for offering faster, accurate and risk-free service to the citizens of India.

Presently India has more than 1, 10, 000 Bank branches, 1,66,894 ATMs (as on June 2014) and 10,81,175 POS Terminals (as on June 2014) across the country. India has 1.94 Crore credit card customers and 40.9 Crore Debit cards customers as on June 2014, as per statistics of Reserve Bank of India. The number of transactions and volume of transactions for both NEFT and RTGS are steadily growing. During the month of Aug

2014, the total number of RTGS Transaction were – Interbank Transactions-346801 and customer transaction-66,21,046. Volume of Interbank RTGS transaction was 9024.57 billion rupees and customer RTGS transactions was 46545.69 billion rupees. Similarly, the total number of NEFT transactions during July 2014 was 71.67 million and Amount transferred was 4577.84 billion rupees.

During recent years banks in India have been seen using social media sites like Facebook, YouTube, Twitter, LinkedIn etc. very aggressively. It is not just the foreign or new generation private banks in India, even the old-fashioned public sector banks have been using social media sites very actively. SBI is seen to use social media sites to create awareness among its customers on various features of Internet banking by providing details on Facebook and appropriate tutorial video in Hindi on YouTube. Recently SBI shared YouTube Videos on its Facebook page on how to use the various feature of Internet Banking like opening an online fixed deposit or breaking the online FD.

As on 10th Sept 2014, the number of Facebook likes for select Indian banks were as follows:

Private Sector Banks		Public Sector Banks	
Bank Name	Number of Likes on Facebook	Bank Name	Number of Likes on Facebook
ICICI Bank	3.1 Million	SBI	3.59 lac
HDFC Bank	2.2 million	PNB	29k
IndusInd Bank	62 k	Canara Bank	19k
Yes Bank	1million	Union Bank	18k

Table - 2 : Number of Likes of various Banks, Source : Facebook, as on 10.09.2014

Findings on Primary Data

1. 60% respondents (bankers & customers) believe that their banks offer very innovative products and services and these services are relevant to their customers.
2. 80% respondents (bank customers) agree that they have not tried all products/services that their bank offers.
3. 40% bank customers agree that they are not using Internet Banking or Mobile Banking as they are not sure enough on Bank's safety measures.
4. 60% Bankers feel banks will introduce more and more innovative products/services in the near future.
5. 76% respondents (bankers and customers) agree that Aadhaar related banking services can lead to more innovative products/services in the future.
6. 78% respondents (bankers and customers) feel that Social Media can play a significant role in making banks understand customers requirements & customers understanding Bank's products/services in a better way.
7. 66% users feel that banks should educate more on their innovative products/services through TV Commercials, YouTube Videos, Facebook etc.
8. 54% respondents agree that there has been substantial increase in number of complaints related to technology related products/services if the banks.
9. Banks can provide more innovative products/services by utilising various combination of customer credentials of more than one channel, such as Debit Card & its PIN along with Internet Banking or Mobile Banking, etc. Credentials of one channel may be instantly acquired by customer through other 2 or 3 channels. Internet Banking password can be reset by the customer by using Debit card, its PIN along with Mobile banking PIN.
10. With smart phones presently being available in India at a rate of just Rs. 2000/- along with very cheap mobile call rate, there is huge scope for the banks to leverage mobile technology based innovative products/services in the future.

Future of Banking on Technology and Innovations

India's Aadhaar (Unique Identity) project can be a game-changer for the banking industry. Since Aadhaar has the capability to uniquely establish the identity of a person based on his Aadhaar card number and his biometric information, this can be leveraged by the banks to establish the true identity of the customer for high value transactions at the branches, for disbursing loans and for various risk management practices. Similarly, banks can leverage the IMPS (Immediate Payment Service) of National Payment Corporation of India (NPCI) to offer mobile based payment services. Banks can leverage on various wireless

technologies like Bluetooth, Near Field Communication (NFC) etc. to offer innovative banking services. Further banks can explore to provide a single chip based card (a debit card or credit card) which can serve multiple puposes, like ICICI Bank's "Unifare" card, thereby eliminating the pain of customers carrying multiple cards (Debit card/Credit Card/Metro Card/PAN Card/Driving Licence etc.). As a smart phone now costs only Rs. 2000/- in India, there is huge scope for the banks to leverage mobile technology based innovative products/services in the future.

A large section of the population in India is still deprived of banking services. Banks can reach to this vast "unbanked mass" by very innovative cost-effective technology-based solutions like micro-ATMs, POS Terminals with Biometric validation (preferably through Aadhaar Database), etc. Soon it may become a reality that a customer calls to a bank mobile number and say "please debit my account no 12345678910 and pay to my friend "Sikha Sunam" Rs. 10,000/-". Such voice command after appropriate validation may be carried out by the bank and bank debits customer's account no. 12345678910 by Rs. 10,000/- and credit the amount to account of Ms. Sikha Sunam.

CONCLUSION

Banks in India have proved themselves to be the leaders of innovative products/services. Mostly the new generation banks led by ICICI Banks and

IndusInd Bank are performing extremely well in providing very innovative banking products/services in India. Even the public sector banks like State Bank of India, Union Bank of India are also very innovative in their product offerings. ICICI Bank among the private sector banks and SBI among the public sector banks are the leaders of banking innovations in India. Other banks should follow their foot prints. Today social media plays a great role for the banks to understand the customers' requirements and provide them the appropriate products/service they dream of. Gone are those days when customers came to the bank branch for getting various banking products/services, now the banks are trying their best to reach their customers and provide them the banking services at customer's home/office or even in their hands (through Mobile!). Banks in India will have a very exciting time ahead; there is huge scope and reason for the Banks to be innovative in their products/services. Innovations in Banks by leveraging various technologies will benefit not just the bank customers, but all the stake holders in the banking sector.

REFERENCES

- Cousens N. & Others (2012), Mobilizing Innovation: The changing landscape of disruptive technologies, KPMG
- Harish V. (2014), Best Practices in Customer Services in Banks, The Journal of Banking and Finance, April-June 2014 Issue

- McKinsey (2013), Disruptive technologies for India
- Payment System Indicators (2014), RBI Monthly Bulletin August 2014 (retrieved from RBI Official web site www.rbi.org.in on 10.09.2014)
- Pearson, M. (2012), Innovation in Retail Banking, 4th Annual Edition, Infosys
- Raghavan R. S. (2006), Perception of Indian Banks in 2020, The Chartered Accountant October 2006 Issue
- Rajan, R. (2014), Financial Inclusion, Technology, Institution and Policies, The Indian Banker (Journal of Indian Banks Association) April 2014 Issue
- Sreelatha, T. & Sekhar C.(2012), Role of Technology in Indian Banking Sector, IJMBS Vol. 2, Issue 4, Oct - Dec 2012, ISSN : 2230-9519
- Terrizzano, A, Pesaresi S. & Naja M. D., (2012), Banking 2016 Accelerating growth and optimizing costs in distribution and marketing, Accenture
- Tiwari U. (2013), Innovation In Banking Sector in 21st Century
- Yadav R. & Suvarna V. (2013), Trends in the Global Banking Industry 2013, Capgemini

