

Technological Innovations and Challenges in Banking Industry in India

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Abstract:

Indian banking system touches the lives of millions of people and it is growing at a fast speed. Banking industry is facing number of challenges in India like changing needs and perceptions of customers, new rules from time to time and great advances in technologies. The pressure of meeting these challenges have forced banks to change the old ways of doing business. The research paper focuses on how the technology has changed the face of banking in India. India's banking system has seen some major (related to managing money) inventions of new things in the past at least 20 years which lead to huge/extreme improvements in banking services and operations. The different inventions of new things in banking and (related to managing money)part/area are ECS, RTGS, EFT, NEFT, Cash machine, Retail banking, Debit and Credit cards, free advice-giving services, online banking system, mobile banking and many more value added products and services. This paper also highlights the benefits and challenges of changing banking (popular things/general ways things are going). Banks are investing heavily in adoption of these inventions of new things. The need of hour is to design such a system that encourages the (wasting very little while working or producing something) of investment in inventions of new things and widens the gap between money/money income and costs involved with reference to (related to computers and science) up step.

Keywords: Indian Banking, (related to managing money) Inventions of new things, (related to computers and science) Changes, Challenges.

I. Introduction:

The banking industry in India has a huge (strong cloth for paintings, building tents, etc.) of history, which covers the usual banking practices from the time of Britishers to the reforms period, (conversion to government ownership/making something nation-wide) to (turning things over from the government to private companies) of banks and now increasing numbers of foreign banks in India. Therefore, Banking in India has been through a long trip. Indian Banking Part/area has seen some changes. It has gone through a huge change in the years since Independence. The

rate of change was especially high in the 1990s and 2000s, when some inventions of new things changed the way banking was perceived and it was the result of self-ruling and caused needs of the health of the Earth/the surrounding conditions. In the 1990s, the banking part/area in India said greater importance and focus being placed on technology and invention of new things. Banks are using technology to provide the best quality of services at greater speed. Information technology has made it convenient for customers to do their banking from (related to where mountains, rivers, cities, etc., are located) (many different kinds of

people or things) places which earlier remain uncovered.

II. Financial Innovation:

Invention of new things is key to survival of banks in modern banking. The importance of invention of new things is well known. Many most important educated people, including Miller (1986) and Merton (1992), have highlighted the importance of products and services in the performing area. New and interesting ideas are shown/are obvious in businesses and in different forms. For example invention of new things in product development is one of the forms of invention of new things that has been used by banks. Right from the beginning stage of modernization inventions of new things have been playing big parts in stopping and improving the ways banking services are made/gave/given to people. Invention of new things is one of the commonly used banking words/word choices. It has been used to describe any change in the scale, scope and delivery of services.

The service industry and increased competition with in investment banking definitely led to increased focus on the ability to design new products, develop better process, and put into use more effective solution for more and more complex problems. These inventions of new things are a result of number of Government rules, tax policies, with the international market and increasing risk in the domestic market. Invention of new things is the process through which finance managers or institutions in managing markets add value to existing plain vanilla products that make happy the user needs. According to John Finnerty

Invention of new things involves the design, the development, and the use of new and interesting legal documents and processes, and the creation of solutions to problems in finance". The different inventions of new things in banking and part/area are ECS, RTGS, EFT, NEFT, Cash machine, Retail Banking, Debit & Credit cards, free advice-giving services, payments of utility bills, fund

moves, internet banking, telephone banking, mobile banking, selling insurance products, issue of free cheque books, travel cheques, Paytm and many more value added services. Intense competition among the banks has redefined the idea of the whole banking system. The banks are looking for new ways not only to attract but also to keep/hold the customers and gain competitive advantage over their competitors. The banks like other business organizations are sending out and using new and interesting sales ways of doing things and advanced marketing tools to gain. The important driver of this change is changing customer needs and expectations. Customers in city-based India no longer want to wait in long waiting lines and spend hours in banking transactions. This change in customer has moved out hand in hand with the improvement of Cash machines, Mobile phone and net banking along with availability of service right at the customer's doorstep. With the coming into view of universal banking, banks aim to provide all banking product and service offering less than one roof and their effort is to be customer centric. While banks are trying to build up good customer relationship and move towards 'relationship banking,' Now a days customers are more and more moving away from the restrictions of/the walls of traditional branch banking and looking for the convenience of distant electronic banking. Information technology and the communications networking systems have revolutionaries the working of banks and things/businesses all over the world.

III. Review of Literature

Inventions of new things lower cost of capital, reduce risks, improve intermediation, and because of this welfare improving. The first function of system is to help the setting apart and distributing and use/military service of money-based useful things/valuable supplies in an uncertain invention of new things is helpful in securing/making sure of smooth functioning and improves the overall the system by cost and reducing risk. More generally, invention of new things has been a

central force driving the system toward greater money-based.

Avasthi & Sharma (2000-01) have carefully studied in their study that advances in technology are set to change the face of banking business. Technology has changed the delivery channels by banks in retail banking. It has also impacted the markets of banks. The study also explored the challenges that banking industry and its (device that controls something/group of people that ensures rules are followed) face.

B. Janki (2002) carefully studied that how technology is affecting the workers' working well and getting a lot done. There is no doubt, in India especially banks will need to use technology to improve operating and customer services. The focus on technology will increase like never before to add value to customer services, develop new products, strengthen risk management etc. the study ends/decides that technology is the only tool to their goals. change and the coming of the internet are among the most dramatic and challenging areas of change for the part/area.

Clever inventions have shown the increased working well and getting a lot done as stated by Rishi and Saxena (2004). Study identified that clever inventions in the banking part/area in have been shown to increase working well and getting a lot done of banking industry around the world.

Arora(2003) highlighted the importance of bank change. Technology has a definite role in helping transactions in the banking part/area and the effect of technology putting into use has resulted in the introduction of new products and services by different banks in India. Hua G. (2009) the online banking acceptance in China by doing an experiment to how users' perception about online banking is affected by the perceived ease of use of website and the privacy policy given by the online banking website.

Jalan, B. (2003), IT revolution has brought about a basic change in banking industry. Maybe no other part/area has been affected by advances in technology as much as banking & finance. It has the most important factor for dealing with the

strengthening competition & the fast spread of (related to managing money) inventions of new things.

Mittal, R.K. & Dhingra, S.(2007) studied the role of technology in banking part/area. They carefully studied investment picture/situation in technology in Indian banks but this study was related to the time period before the Information Technology Act and at that time technology in Indian banks was very low. But both the nicely presented their views.

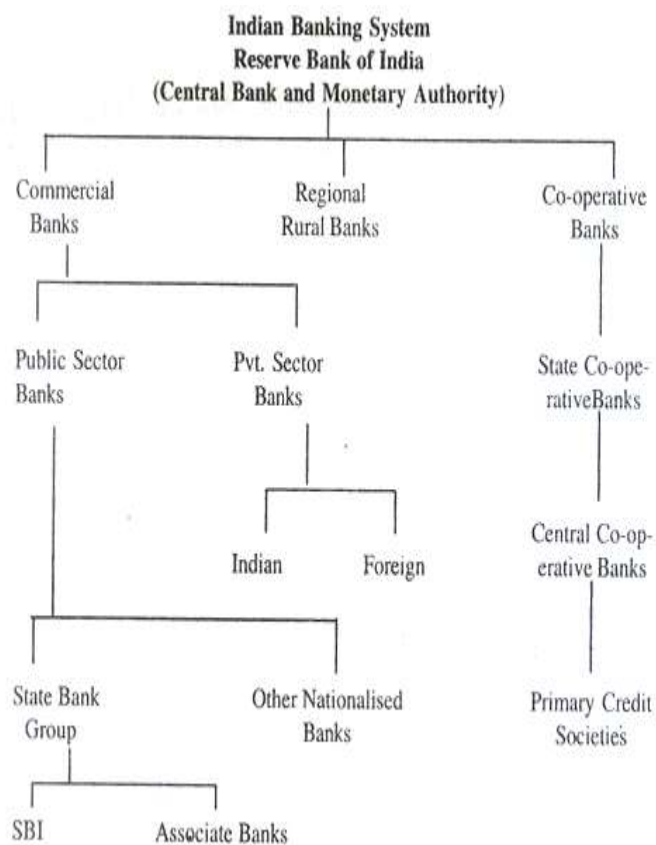
Padhy, K.C. (2007) studied the effect of technology development in the banking system and he also highlights the future of banking part/area. The core abilities will provide advantages. From the above reviews it is watched/followed that the banking businesses itself adopted different new and interesting big plans/layouts/dishonest plans for furtherance of their business and to attract more and more customers. These have resulted and keep their brand image even in the competitive. Further, technology is one of the important pieces/parts where maximum stresses are given for spreading around of new and interesting ideas and it is watched/followed that major invention of new things happened in this field over the last few years.

IV. Objective of the Study

This paper aims to examine the different new and interesting (tools or objects used to do work or measure something) introduced by banks in recent times.

- To study how inventions of new things have added/have given to the development of Indian banking.
- To study the challenges faced by Indian banks in the changing picture/situation.

Structure of Indian Banking system:



STRUCTURE OF INDIAN BANKING SYSTEM

V. Innovations in Banking Sector

Banking industry in India has also a new height with the changing times. Customer services and customer happiness are most important responsibilities of banks now days. Information technology has given rise to new inventions in the product designing and their delivery in the banking and finance businesses. Technology offers an opening for banks to build new systems that take in hand a wide range of customer needs including many that may not be possible nowadays. Banking through internet has come out as a useful thing/valuable supply for higher, control of operations and reduction of cost by replacing paper based and labor intensive methods with automated processes this way leading to higher working well and getting a lot done and a money-making state. Invention of new things connected with change totally changed the banking and that is further tuned by the competition in the banking industry. Challenging

business within the banking system create more invention of new things in the fields of product, process and market.

ATM

An Automated teller machine is a computerized device that provides a bank's customers a secure method of transactions in a public space without a human clerk or bank teller. Cash machine can be interior Banks need not get permission of the RBI for installation of cash machines at branches and extension counters for which they hold licences issued by the Reserve Bank. They can also install offsite Cash machines without RBI approval. However, they should get a license from the office of DBOD of RBI, before operationalizing the Cash machine, to be in being like other people with section 23 of the Banking Regulation Act. The penetration of Cash machines across the country increased in 2012-13 with the total number of Cash machines crossing 1, 00,000, clocking a double digit growth during the year. This growth was driven mostly by banks, with their share in total Cash machines picking up quickly to about 38 per cent. Also Over the years, the relative growth in off-site Cash machines has been much more than that of on-site Cash machines. As a result, by 2012-13, off-site Cash machines accounted for more than half the total Cash machines in the country.

Debit card and credit card

A debit card is an electronic card issued by a bank which allows bank clients access to their account to withdraw cash or pay for products and services. This removes the need for bank clients to go to the bank to remove cash from their account as they can now just go to an Cash machine or pay electronically at locations. This type of card, as a form of payment, also removes the need for cheques as the debit card immediately moves money from the client's account to the business account. A credit card is issued by a company giving the holder an option to borrow money, usually at point of sale. Credit cards charge

interest and are mostly used for (for only a short time) financing. Interest usually begins one month after an is made and borrowing limits are pre-set according to the person's credit rating. There has been growth in issuance of debit and credit cards by public and banks. On the other hand Debit cards are a more popular mode of electronic money than credit cards. So far, debit cards have been a more popular mode of electronic money than credit cards in India. While banks have been frontrunners in issuing debit cards, new banks continue to issue credit cards.

NEFT

According to Reserve Bank of India, National Electronic Money Move (NEFT) is a nation-wide payment system to help one-to-one money move. Under NEFT, people, firms and can electronically move money from any bank branch to any individual, firm or having an account with any other bank branch in the country participating in the Big plan/layout/dishonest plan. The money under NEFT can be moved by people, firms or maintaining accounts with a bank branch. Even to those people who is not having a bank account can deposit cash at the NEFT-enabled branches with instructions to move money using NEFT. However, such cash payments will be restricted to no more than Rs.50, 000/- per transaction. Such walk in-customers have to furnish full details including complete address, telephone number, etc. NEFT, this way, also help in move of money even without having a bank account. This is a simple, secure, safe, fastest and cost effective way to move money especially for Retail payments.

RTGS

Real Time Gross Settlement system (RTGS), introduced in India since March 2004, is a system through which electronics instructions can be given by banks to move money from their account to the account of another bank. The RTGS system is maintained and operated by the RBI and provides a means of and faster money move among banks helping their operations. As the name suggests, money move between banks

happens on a 'Real Time' basis. Therefore, money can reach the receiver immediately and the receiver's bank has the responsibility to credit the receiver's account within two hours. There has been in both the amount/quantity and value of all types of electronic transactions of SCBs in general and debit transactions in particular over the last few years, a (popular thing/general way things are going) that continued in 2012-13.Both RTGS and NEFT regularly posted double digit growth in terms of the amount/quantity of transactions routed through these systems.

Paytm :

Paytm is the name of acronym for "Pay Through Mobile" ,It is an India's Largest digital payment company electronic payment and e-commerce company based out of Delhi NCR, India Launched on August 2010.using money in Paytm wallet we can pay N Number of goods without using cash among the transactions we can use to pay all type of utility bills ,mobile recharges, online tickets booking, online shopping etc. The founder is Vijay Shekhar Sharma, in 2015 Paytm received license from Reserve Bank of India to start one of the first payments bank called "**Paytm Payments Bank Limited**". In 2013 this company , launched Paytm Wallet which became the India largest mobile payment service with platform over 150 Million wallets and 75 million Android based app downloads as on November 2016 . The usage is largely due to Demonitization of 500 and 1000 Rupee currency notes. In May 2017 Paytm Launched Payments Bank for Paytm E-Wallet users. Recently launched Paytm mall, online market place at Noida with digitizing the catalogues of more than 1,00 cars and Two wheelers dealerships to increase online usage and off-line sales. The Upcoming activities of Paytm is to discover events and book them instantly by acquiring a majority stake in insider. India's leading ticketing platform for events and properties.Paytm is seeking a license to set up a money market fund where user can store money and earn interest,in competition with the countries bank.

Latest Schemes and Apps Launched by Top 5 Indian Banks are shown in Table.1

STATE BANK OF INDIA	1)Boutique financing scheme, 2)E-KYC, 3) eforex 4) First home grown INDEX “composite index” 5) Youth for india 6)Tab banking facility 7)State Bank Freedom App IMT APP -(instant money transfer)8) Twitter Handle account , Tab banking Facility, 'State Bank of India No Queue 'a Mobile App
ICICI	EMI ON DEBIT CARD ,Digital banking “pocket” India’s first” transparent credit card “in association with American Express , ICICI Apathon App ,Branch on Wheel, Student Travel Card , Digital Village Project in Akodara Village of Gujarat Tap and pay, I-Mobile app for windows phone, ‘Saral Rural Housing Loan’ Scheme
AXIS Bank	“Asha Home loan”, “Kisan card”, “LIME App” Airtel money
HDFC Bank	Awareness initiative ‘Dhanchayat PAYZAPP App”, “Chillar”, DDA Housing Scheme 2014
Bank of India	Instant Money Transfer (IMT)

Some latest innovations in banking sector are:

1)Some Banks has leveraged the popularity of wearable devices and has launched ‘Watchbanking” with its Apple watch which will provide all its banking services through devices like iOS and Android.

2)New technology such as multi-social payment app across social platforms such as Facebook, twitter, Whatsapp, SMS or Email. This app helps for sending and receiving money without asking for bank details. The user just has to use the hastag #PingPayKaro in order to make transactions.

VI. Challenges Ahead For Banking Sector :

Changes in Indian banking system presents opportunities and challenges for the banking industry. Developing or buying the right technology, sending out and using it and then taking advantage of it to the greatest possible

extent is extremely important to maintain high service and standards while remaining cost effective and delivering return to shareholders. Managing technology is therefore, a key challenge for the Indian banking part/area. Developing countries like India, has a huge number of people who don't have access to banking services due to scattered and broken-up locations. But if we talk about those people who are getting/helping banking services, their expectations are raising as the level of services are increasing due to the coming into view of Information Technology and enormous competition between the services & products given by diverse banks. Since, other countries banks are in performance in Indian market, the number of services on hand has increased and banks have laid spotlight on meeting the customer expectations.

India is a country with huge population and that of India is such that it is going to become the most populated country very soon. can bring about close between the city-based and population. The first challenge is to give consistent service to customers ignoring the kind of customer whether or city-based. Keeping/holding onto/remembering of customers is going to be a major challenge. Banks need to focus on keeping/holding customers and increasing. Even with Cash machine machines and Internet Banking, many people still prefer the personal touch of their neighborhood branch bank. Technology in now a days has made it possible to deliver services throughout the branch bank network, which provides instant updates for checking accounts and fast progress of money for stock moves. However, this dependency on the network has brought IT department's added/more responsibilities and challenges in managing, maintaining and improving the performance of retail banking networks. Interesting/explaining, securing/making sure of that all bank products and services are available, at all times, and across the whole organization is extremely important for today's retails banks to create money/money income and remain competitive. Besides, there are

network management challenges, within which/by which keeping these complex, distributed networks and applications operating properly in support of business goals becomes extremely important. Specific challenges include securing/making sure of that account transaction applications run between the branch offices and data centers. Banks in India will now have to work towards a vision to have an improved retail delivery system. Such as include changed branches, improved telephone services, and innovative internet banking functions that provide a frequently (all the time) positive multi-channel experience for the customer.

Some of the challenges that the banks are facing today are:

- Competition from private banks
- Competition from MNCs
- Managing (branched out/done different things) needs of customers
- Reducing customer loyalty
- Successfully dealing with legal/law-based good changes
- Breaking down and rebuilding and reorganizing banks' setup towards thinner and leaner offices;
- Maintaining high quality valuable things.
- Management of damaged/weakened valuable things.
- Keeping pace with technology up-Steps
- Problem of Non-Performing Valuable things (NPA)

Some challenging technologies for Banking Sector are:

- 1) Biometric
- 2) In-car applications
- 3) Smart watches/ Wearable's
- 4) Facial Recognition.
- 5) Google Smart Glasses.
- 6) Robotics
- 7) Upgraded ATMs
- 8) Digital finance
- 9) Oculus Rift
- 10) Cryptocurrencies

The banking industry is changing at an amazing speed. While at the one end, we have millions of

savers and who still do not use a bank, another part/section continues to bank with a physical branch and at the other end of the spectrum, the customers are becoming familiar with Cash machines, e-banking, and cashless. This shows the huge market. Banks are setting up different delivery channels to contain operating costs like off-site Cash machines, internet banking, tele banking, transaction processing, etc. No doubt, the benefits of technology have brought a sea-change in the outlook of modern banking. Now the goal of banking is not just to make happy but to engage with customers and enrich their experience and for the successful of this goal, the only competitive advantage is to give the customer a best blend of technology and traditional service. With technology occupying an important role in delivery of banking services, the expectations of the person (who uses a product or service) have also been growing. Broadly, these expectations are fast service with response time, service delivery, tailor-made and value added products to suit specific needs, hassle-free procedures and minimum transaction costs, and pleasant and decorated service.

VII. Conclusion:

India is one of the top 10 in the world, where the banking part/area has huge/extreme possible ability to grow. The number of Cash machines has doubled over the past few years, with over 50 per cent expected to be set up in small towns. Also, the scope for mobile and internet banking is huge. At the start of 2013, only 2 per cent of banking payments went through the electronic system in the country. Today, ability to move around and customer convenience are viewed as the first factors of growth and banks are continuously exploring new technology, with terms such as mobile solutions and being used with greater. nevertheless, Indian banking industry faced many challenges such as ever-increasing competition, pressure on spreads, and changes to match up/make even with global standards have required/resulted in a processes in order to remain competitive in this energetic/changing. Banks

have to put into use an approach to satisfy the ever changing needs of customers and to grab a better. Development of fancy products with low cost technology is the key. This calls for in- depth investigation of customer needs the market and competitor. This analysis plays a very important role in figuring out new products and services. Due care will have to be made while hugging/supporting technology and changing traditional touch points to electronic ones, so that human touch with customers is also not lost. In the end, it can be rightly said that working well and getting a lot done and will be the watch words in the banking industry in the years ahead. Planning organizational effectiveness and operational will govern the survival and growth of besides bringing changes in the attitude/set of opinions of the workers, which is extremely important with the changing times.

References

1. Andrade, C “Banking products and services” in Indian institute of banking and Finance, Mumbai.
2. Avasthi G P M (2000-01), “Information Technology in Banking: Challenges for Regulators”, Prajnan, Vol. XXIX, No. 4,pp. 3 – 17.
3. Dadabhoy K. Bakhtiar (2013) “Barons of Banking” Random House.
4. Reddy, Y. V. 2005. "Banking Sector Reforms in India: An Overview." RBI Bulletin. June.
5. Sethi Jyotsna, Bhatia Nishwan (2012) “Elements of Banking and Insurance” New Delhi, PHI Learning Pvt. Ltd.
6. Shastri, R.V. (2003), “Recent Trends in Banking Industry: IT Emergence”, Analyst,(March), pp. 45-46.
7. Kanakalatha.V (2017)” Emerging Issues and Challenges in Banking and Financial Services on Indian economy- Post Demonetization” ISSN: 2454-132X, Volume3, Issue3,May-June,2017.,pp.1669-1673.www.ijariit.com,editor@ijariit.com.,
8. Shekhar K C, Shekhar Lekshmy (2013) “Banking: Theory and Practice” Noida, Vikas Publishing House Pvt. Ltd.
9. Suresh Padmalatha, Paul Justin (2010) “Management of Banking and Financial System” Singapore, Pearson Education Singapore Pvt. Ltd.
10. Source – <http://www.financialexpress.com/article/industry/banking-finance/npas-could-reach-5-4-by-september-2016-says-rbi/183261/>
11. Source – RBI Financial Stability Report December 2015 - <https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/0FSR6F7E7BC6C14F42E99568A80D9FF7BBA6.PDF>
12. Economic Times, 18th October 2015 <http://economictimes.indiatimes.com/industry/banking/finance/banking/7035-wilful-defaulters-owe-rs-59000-crore-to-psu-banks/article-show/49438094.cms>