



Innovation in Indian Banking Sector

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Abstract: In an economy like India where the population has reached to 1200 million and out of this 500 million are dealing with banks in every single day, in such country there was an urgent need to ensure financial inclusion and greater transparency in banking sector and this need was fulfilled by adopting technology and innovation in working system of banks. In order to bring this innovation the Indian banking sector is going through a vital change from all its verticals and this transformation not only leads to drastic change in bank's approach towards its customers but also leads to vigorously information and technological change of banking products too. As far as the evolution of innovation in Indian banking sector is considered it can be tracked from 1990s with the introduction of LPG policy in India and the adoption of this policy entirely changed the way of banking. Beginning of 21st century has significantly marked a growth in Indian banking system. Innovation in banking sector got a boost with the generation of private and foreign banks which lead to activation of technological sophistication in every banking transaction.

Technology innovation brought fundamental shift in the functioning of banks in India both internally and externally as it enables banks to provide better customer services. After the adoption of Technology by Indian banking sector India emerges as one of the youngest but most powerful country of the global village and boost up the FDI from all parts of the world to India. Innovation in banking also leads to Re-Engineering of Business Process and tackle issues like, how to deliver best products and services to customers, how to design an appropriate organizational model to fully capture the benefits of technology, what all steps can be taken to change the business process, moreover how to use technology for deriving economies of scale, what all means are available to attain cost efficiencies and which all efforts are needed to create a customer - centric operation model. The key advantages of adopting Technology resolutions in the fields of banking are faster, accurate and efficient analysis data and information, speed up the decision making process and one of the most recent examples of this IT innovation in banking is ATMs. As these IT innovations have transformed the outline of front offices in bank branches now customers are no longer required to visit branches for their day to day banking dealings like cash deposits, withdrawals, cheque collection, balance enquiry etc, moreover this has also led to cutback the branch banking transaction costs nearly by ten times. Significance of IT not only ends here it played a vital role in strengthening the banking networks as one of the accurate examples of it can be seen that banks coming together

to share ATM Networks. The diverse innovations that took place in Indian banking sector are ECS, RTGS, EFT, NEFT, ATM, Retail banking, Debit and Credit cards, free advisory services, online banking, mobile banking and many more value added products and services.

Keywords: Innovative Banking, Technological Changes, Indian Banking sector

1. INTRODUCTION

Indian Banking has been through a long expedition as it has witnessed a number of changes. The financial expansion in Indian banking industry occurred after the nationalisation of 14 major scheduled banks in July, 1969 and 6 banks in April, 1980. In the 1990s, the Indian banking sector sited greater emphasis on technology and innovation. At present Indian banking sector is most capitalised and well-regulated sector. Currently there are 27 public sector banks in India out of which 20 are nationalised banks and 6 are SBI and its associate banks, and remaining two banks are Bharatiya Mahila Bank, which are categorised as other public sector banks, there are 25 private sector banks, 43 foreign banks, 56 regional rural banks, 1,589 urban cooperative banks and 93,550 rural cooperative banks. Central bank granted approval to 11 payments banks and 10 small finance banks in FY 2015-16. According to AEP "Banking Sector in Emerging Economies" report India at fourth ranks in terms of income ratios and at sixth rank in its cost ratios and profitability ratios. The future of Indian bank looks not only exhilarating but also transformative. India's banking sector could become the **fifth largest banking sector in the world by 2020** and the **third largest by 2025**. In future, technology will make the engagement with banks more multi-dimensional that will prolong to develop and enlarge banking services. As in this era of technology and innovation therefore Banks are getting advanced so that they can provide better quality of services at greater speed to their users. Internet banking and mobile banking is one of the most prominent examples of use of technology in Indian banking sector at a rapidly rate in order to make banking transaction convenient and easily accessible for all customers even though they are at different places. The innovation Indian banks has not only stopped at this only it also includes some new concept also which came into existing like multi-channels, ATMs, credit cards, debit cards, telephone/mobile banking, internet banking, call centres, etc.

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After all this innovation reform the Indian banking segment is redefined from a mere financial mediator to various financial service that to under one roof acting like a financial hypermarket. But all this technological innovation created an intense competition among the banks and has redefined the concept of the entire banking system. The banks are searching for new ways not only to attract but also to retain the customers and gain competitive advantage over their competitors.

2. FINANCIAL INNOVATION

Financial innovation act as a key of survival for banks in current banking environment. The importance of financial innovation is widely recognized. Numerous leading scholars, including Miller (1986) and Merton (1992), have highlighted the significance of products and services in the financial sector. Innovative ideas are visible in diverse industries and that too in different forms. One of the most commonly seen example of innovation is product development that has been used by banks very commonly nowadays. Right from the commencement stage of financial transformation innovations have been playing vital role in curtailing financial exclusions and improving the ways banking services are rendered to people. Financial innovation is one of the most commonly used banking terminologies. These are used in order to describe any change in the scale, scope and delivery of financial services. The freedom given to financial service industry boostup the competition among investment banking and this undoubtedly led to rise in the ability of banks to design new products, develop better process, and implement more effective solution for increasingly complex financial problems. These financial innovations are outcome of number of Government regulations, tax policies, globalization, liberalization, privatization, global integration. In simple words financial innovation is the process by which all financial institutions existing in financial markets add value to their existing plain vanilla products in order to satisfy the user needs in best possible manner. According famous definition of John Finnerty, "Financial Innovation involves the design, the development, and the implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in finance". The list of these various innovations in banking and financial sector are ECS, RTGS, EFT, NEFT, ATM, Retail Banking, Debit & Credit cards, free advisory services, payments of utility bills, fund transfers, internet banking, telephone banking, mobile banking, selling insurance products, issue of free cheque books, travel cheques and many more value added services which reduce the customers efforts in paying cash to different parties. This also created an intense competition among the banks as result this banking sector are trying to redefined the concept of the entire banking system. The banks are looking for new methods to attract and to retain the customers and gain competitive advantage over their competitors. The banks like other

business organizations are developing innovative sales techniques and advanced marketing tools to gain supremacy. The main force behind this innovation in banking sector is rapidly changing customer needs and prospect. In this era of internet and speed no Customers want to waste his time while wait in long queues and spend hours in banking transactions. This change in customer attitude act as a catalyst which leads to speedup innovation in banking sector and outcome of this technological innovation like ATMs, Mobile phone and net banking came into existence. With the emergence of universal banking, banks aim of provide all banking product under one room get accomplished. While banks are determined to strengthen customer relationship and move towards 'relationship banking', customers are increasingly moving away from the limitations of traditional branch banking and in the hunt for the convenience form of electronic banking. Information technology and the communications networking systems have revolutionary innovation the working of banks and financial entities all over the world.

3. LITERATURE REVIEW

The following is brief review of literature done by different researchers worldwide in the area of innovation in Indian banking sector.

Merton (1992) in their research gave a new term to innovations done in banking sector i.e. "Financial innovations" and highlighted key advantages of these innovations which are related to low cost of capital, reduce financial risks, improve financial intermediation, and lead to customer welfare enhancing. He also focused on how innovation help in improving main functioning of banking system i.e. to facilitate the distribution and consumption of economic resources in an uncertain environment in his research. **Avasthi & Sharma (2000-01)** have emphasized on technological advancement that has lead to change the face of banking business in their study. The researcher also told about Technology malformed specially regarding the delivery channels of banks in retail banking sector, he also explored the various challenges that banking industry is facing in its initial face. **B. Janki (2002)** research bring into light that how technology is affecting the employee's productivity. The research also highlights the desperate need of technological innovation in India particularly in public sector banks in order to improve their operating efficiency and customer services. Therefore technology are done more in area of customer services, develop new products, strengthen risk management etc. the study concludes that technology innovation is the only tool to achieve the goals of sustainable development of an economy. **Arora (2003)** in his research has put focus on the consequence of bank transformation. Technology innovation has a definitive role in facilitating transactions in the banking sector and the impact of this innovation implementation in banking sector has come up with new products and services. **Rishi and Saxena (2004)**

have also given his contribution by doing research on Technological innovations. Study acknowledged that technological innovations in the banking sector in industrialized countries have been shown to increase productivity of banking industry around the world. According to **Merton and Bodie 2005** research financial innovation as a supportive tool insuring smooth execution and improves the overall efficiency of the system by minimizing cost and reducing risk. It is not wrong to say that financial innovation has been a central vigour for driving the financial system toward greater economic competence. **Mittal, R.K. & Dhingra, S (2006)** studied the role of technology in banking sector. They analyzed investment scenario in technology by Indian banks but this study at sametime put light on the various aspects which was prevailing in banking sector before the introduction of Information Technology Act and also tell about what all problems were faced by banks in Indian banks when technology was very low. Padhy, K.C. 2007 research put light on the impact of technology development in the banking system and he also highlights the future of Indian banking sector. His research also put light on the core competencies that today banks are facing and also stated various factors that provide comparative advantages to one bank over other. In nutshell, study reviews that the banking industries itself adopted various innovative schemes for furtherance of their business and to attract and retain more and more customers. **Hua G. (2009)** research mainly investigates the online banking recognition in China by conducting an experiment to investigate what is user's perception towards online banking, do customer feel ease and secure while doing online financial transaction on bank website. **Jalan, B. (2010)** in his research mainly focused on all the IT evolution that has changed the entire banking industry. Perhaps there is no other sector that has been affected by advances in technology as much as banking & finance sector has. It has the most important factor for dealing with the rising competition & the rapid explosion of financial innovations.

4. OBJECTIVE OF THE STUDY

1. Brief description evolution of Indian banking sector.
2. The purpose of the study is to emphasize the new financial innovations in the Indian banking sector.
3. To study the challenges faced by Indian banks in the changing scenario.

5. RESEARCH METHODOLOGY

The study is done in order to make an estimation of the current position of the Indian Banking sector. The entire paper is based on the secondary sources of data viz. the various websites, academic journals, etc.

6. EVOLUTION OF BANKING IN INDIA

The evolution of Indian banking sector can be divided in 3 Phases. They are as mentioned below:

PHASE I: (EARLY PHASE FROM 1786 TO 1969 OF INDIAN BANKS)

The birth of Indian banking sector can be trace from the year 1786 when first Indian bank name as "General Bank of India" was set up, in this continuation the second bank which came into existence in same year was "Bengal Bank". Later on after the invasion of East India Company in India Bank of Bengal (1806) flourished most rapidly and many new bank came into existence as independent units they were Bank of Bombay (1840) and Bank of Madras (1843) as these banks were as Presidency Banks. In the year 1921 the three banks were amalgamated and Imperial Bank of India came into existence and his further started to work as private shareholders banks with mostly Europeans shareholders. Allahabad Bank was the first bank that was established as absolutely by Indians in 1865. In 1894 Then Punjab National Bank Ltd. was set up as 2nd wholly Indian bank with headquarters at Lahore. Between 1885 and 1913 large number of banks were set up namely as Bank of India, Central Bank of India, Bank of Baroda, Canara Bank, Indian Bank, and Bank of Mysore. till 1932 the functioning of all these banks were virtually being regulated by the Imperial Bank of India, which was established in 1921 by merging three Presidency banks. But with increase in number of banks a need of another regulatory body was felt in order to speed up the growth and development of banks all over economy equally as result of this necessary the Reserve Bank of India was established via the RBI Act of 1934 as the banker to the central government. RBI launched its operations from April 1, 1935. Its headquarters were in Kolkata in the beginning, but later on it was shifted to Shahid Bhagat Singh Marg, Mumbai in 1937. It was mainly a commercial bank but also served as banker to the government to some extent. The overall regulation of banking in India was vested with the Reserve Bank of India as the Central Banking Authority. But the limitation of 1st phase of banking was that the public of that era had very less confidence in the banks, instead doing saving in banks the Postal department was considered safer for saving.

Phase II: (Nationalization of Indian Banks-up to 1991, prior to Indian banking sector Reforms.) major steps taken by Indian Government after Independence that change picture the entire Indian Banking Sector. The major change in Indian banking sector arrived with nationalization of the Imperial Bank of India in 1955. This extensively spread the banking facilities to all rural and semi urban areas. The second phase of change in Indian banking arises when State Bank of India was declared as a chief intermediary of Reserve Bank of India, moreover it started acting as the knob for Indian banking

transactions of the Union and State Governments all over the country. Later on all 7 subsidiary banks of State Bank of India were nationalized on 19th July, 1959. The last change of second phase of banking sector was nationalization of 14 major commercial banks in the country because of efforts of the Prime Minister of India, Mrs. Indira Gandhi. 6 more banks got nationalization in the second phase of reforms carried out in Indian Banking sector. This all reforms brought 80% of the India banking segment under Government ownership and this led to increase the public's faith on public sector banks and because of nationalization sustainability of banking system increased to large extent.

Phase III: (Indian Banking System with the advent of Indian Financial and Banking Sector Reforms after 1991)

With the introduction of LPG policy in India in 1991, committee was setup in order to properly implement this liberalization policy in all banks the committee was formed under the chairmanship of M. Narasimham and name given to this committee was Narasimham committee. In this phase many new products and facilities came into existence in the banking sector and all necessary measures were taken by government in order to provide best services to the customers. As the result of this various financial innovation took place in banking sector and new ways of banking in the form of Mobile banking and internet banking came into existence during this phase. This all changes the entire scenario of Indian banking sector in just 2 decades and made banking services very convenient, speedy, transparent and accurate for customers.

Innovations in Indian Banking Sector The Innovations in the banking sector have been categorized into three broad categories viz.

i. Types of innovative Banking

- a. E-Banking
- b. Core Banking
- c. Corporate Banking
- d. Investment Banking
- e. Rural Banking
- f. NRI Banking
- g. Retail Banking

ii. Types of product & services

- a. Total branch automation
- b. Any branch banking
- c. Demat Service
- d. Microfinance

- e. Plastic money
- f. Mobile Banking

iii. Electronic systems

- a. ATM
- b. RTGS
- c. FINACLE

7. TYPES OF INNOVATIVE BANKING

a. E-Banking

Traditional methods used by banking sector in order to provide services to their customers include physical presence of account holder in branches of banks but after the internet innovation in banking sector e-banking came into use as the consequences of this the delivery of traditional banking services sector become convenient and speedy. After the introduction of e-banking to their customers, such as opening accounts, transferring funds and electronic bill payment became very easy and quick. E-banking can be offered in two main methods. In first, a bank with physical offices can also create an online site and offer e-banking services to its customers in addition to the regular channel. Normally, e-banking is provided without charging any extra charges to customers. Therefore more customers are attracted by the convenience of e-banking through the Internet, and in turn, banks can operate more efficiently when customers perform transactions by themselves rather than going to a branch and dealing with a branch representative. E-banking services are delivered to customers through the Internet and the web using **Hypertext Markup Language (HTML)**.

b. Core Banking

Earlier core banking rotated around basic account management, information regarding customers and account details only. Today's core banking deals in totality and has many features viz. 360 degree customer view, new products origination, banking channels, Banking analytics, security control, etc

c. Corporate Banking

That aspect of banking which deals with corporate customers is known as corporate banking. It is the main source of profit for many of the banks; however it is also the source of regular write-downs for loans that have soured. The corporate banking segment deals with a range of clientele viz. small to mid-sized local businesses to large conglomerates with billions in sales and offices across the country, offering products and services like Loans and other credit products, Treasury and cash management services, Equipment lending, Trade finance, etc.

d. Investment Banking

This division of banking is related to the creation of capital for other companies, governments and other entities. They underwrite new debt and equity securities for all types of corporations, aid in the sale of securities, and this also help companies to do mergers and acquisitions, reorganizations and broker trades for both government institutions and private investors. Investment banks also provide guidance to issuers regarding the issue and placement of stock. The Investment banks help corporations, governments and other groups to plan and manage large projects, saving their client time and money by identifying risks associated with the project.

e. Rural banking

Rural Bank can be defined as rural financial institution/cooperative/ community bank or deposit taking MFI that provides customized financial services to rural communities. It traditionally used to serves the financial needs of the people basically living in rural areas the main aim of developing rural bank was to help rural people to improve their living standard and provide them loan facility for agricultural purpose as large ratio customers in these banks are mainly of farmers or owner of small scale industries. Unlike urban areas banks rural banks was having large number of relatively small and specialized customer. These banks were set up on the recommendations of Narasimham Working Group during the tenure of Prime Minister Indira Gandhi's government with a view of developing rural are.

f. NRI Banking

This facility is designed in order to serve baking need of NRI which are spread over the globe. the various type of account facilities provided by the NRI banking are NRE (Non Resident External Account) NRO (Non Resident Ordinary Account) FCNR (Foreign Currency Non Resident Account). NRE was formed in 1970 by Government of India in order to provide facilities like remittances, savings, earnings, investments and repatriations to NRIs this account was governed by exchange control regulations stated in FEMA Act.

g. Retail banking

The second name given to the retail banking is Consumer Banking. As the name suggest these banks offer various services more to individual customers in comparison of than to companies, corporations or other banks. The services offered by these banks are savings and transactional accounts, mortgages, personal loans, debit cards, and credit cards.

8. TYPES OF PRODUCT & SERVICES**a. Total branch automation**

The introduction of IT in banks has made banking concept totally automatic and this has speeds up the transactions

accuracy. Banking automation mainly refers to the reduction of human intervention in banking system in order to bring more accuracy and to eliminate biasness fro entire banking system.

b. Any Branch Banking

Any Branch Banking (ABB) is other facility given by banks to their customers so that they can operate their bank accounts from any of the other network branches of same bank. The branch where the customer maintains his account is known as the base branch and the branch from where he carries out his day to day transactions is referred as the remote branch. The facilities available under this banking system are cash withdrawal & cash deposits, account statement, facility to issue multi- city cheques fund transfer, balance enquiry, purchase of demand drafts, pay order, repayment of loan account, etc.

c. DEMAT Service

DEMAT Account stands for dematerialized account is mainly related to investment, purchase and sale of shares and other financial assets. In DEMAT account the securities are held in electronically form and this has eliminated the need of holding physical paper certificate as evidence of the investment in share or any other tool. The availability of DEMAT has bought sale and purchase of the share to new height as it has eliminated the need of brokers in every steps. It offers secure and convenient way to keep track of the securities and investment over a period of time without the hassle of handling physical documents. It provides facility of online trading.

d. Microfinance

Microfinance is the bank for those who have low income and don't have any permanent access over money. It was made in order to improve condition of people who are too poor to be served by regular banks, microcredit or microfinance provide banking services to unbankables like providing them facility like savings, providing them small loans, other small amount insurance facilities. In simple word micro bank are the bank for people with less money.

e. Plastic money

Plastic money is also known as polymer money it is a general term given to all type of bank card which include debit card, credit card, smart card. Moreover it is one of the best alternatives to the cash or currency as it is convenient to carry and handle and act as most convenient mode of payment for goods and services. These cards were introduced in 1950s and are now has become an essential source for payment special during demonetisation period in India and along with this it has successfully reduces the risk of handling a huge amount of cash.

f. Mobile Banking

IT innovation in banking sector gave birth to most frequently used service called as Mobile banking. It is a service which is nowadays is almost provided by every bank to its customers that allow them to conduct a range of financial transactions in remote areas also by just using a mobile device such as a mobile phone or tablet and using software, usually called an app, provided by the bank. This service is usually available on a 24x7 basis. The different types of financial transactions that a customer may transact through mobile banking are obtaining account balances, getting list of latest transactions, electronic payments of bill, and funds transfers among the customer's or another's accounts. Some even enable copies of statements to be downloaded. One the major advantage of mobile banking from bank's point of view is that it reduces the cost of handling transactions by reducing the need for customers to visit a bank branch for non-cash withdrawal and deposit transactions. In simple word mobile banking is a form of banking that travel with you and provides you with the facility to operate your banking account from any place, at any time and in any condition.

9. ELECTRONIC SYSTEMS

a. ATM

ATM stands for "Automatic teller machine" it is one of the most widely use electronic channel of banking sector. Its working is controlled by computer through this customers can make withdrawals, check their account balance and know they can even deposit their money into their account that to without going to bank and this become possible only through ATM. with the increase in demand of customer towards use of ATM now these are available within bank premises and even anywhere outside the bank premises. In order to meet customer demand for ATM the banks has increased their dispersion further with the total number of ATMs and finally it has reached to 0.18 million in 2015.

ATM & Card Statistics for December 2015 shows that

Total No. of ATM's are:

On-site: 97, 793

Off-site: 95, 975

b. RTGS

RTGS stand for Real-time gross settlement systems it an electronic method of fund transfer. In this funds transfer takes place from one bank to another on a "real time" and on "gross" basis. Now the question arises what is real time and gross settlement. Here the words 'Real Time' mean the process of instructions that are executed at the time funds are received, rather than at some later time. On the other hand "Gross Settlement" refers to the settlement of funds transfer

instructions occurs individually (on an instruction by instruction basis) i.e. transaction is settled on one to one basis without bundling or netting with any other transaction

RTG is one of the most popular and fastest possible money transfers system which include the banking channel. The time taken for effecting funds transfer from one account to another is normally not more than 2 hours. The only disadvantage of this method is that if it is once processed, payments are final then they are irrevocable. RTGS is used for high-value transactions that require immediate clearing. In some countries the RTGS systems may be the only way to get same day cleared funds and so may be used when payments need to be settled on urgent base.

c. FINACLE

This system provides the holistic and integrated transformation approach, complete with solutions and services. Finacle solutions addresses the requirements of retail, corporate and universal banking worldwide like: Core banking solution, E-banking solution, Mobile banking solution Wealth management, CRM requirements, etc

10. CONCLUSION

After number of technological innovation the entire Indian banking sector it emerged as a very firm banking industry in entire world not only in terms of capital but also in term of making and retaining customers. The Indian banking sector came to a position where it gives global competition to other banks of world in terms of higher productivity and efficiency in services.. The focus has now been shifted from product to customer. The one of the major aspect in development of Indian banking industry is Private Sector Banks of India as act as catalyst to ignite the fire of competition in the nation as the result of which immense progress can be witnessing in both public and private sector banks. Innovation convert Indian banking into the leaders of Internet banking, mobile banking, phone banking, ATMs.

Information Technology only the tool which re-defined and re-engineered banking system and gave it face that today banking sector is having, the use of these IT reform make it very clear that the future of banking will be more sophisticated and standard of services to the customers will be at continuous be improved with new innovations in product and process. Thus, it is correct to say that innovation has led to "conventional banking to convenience banking" and "mass banking to class banking" especially in developing economy like India.

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