

Innovations and technology in banking sector in India

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ABSTRACT:

Banking sector is playing pivotal role for improving growth rate of economy in India. To accelerate the growth rate in the Banking sector technology plays key role. The technology usage in the banking operations has been increasing day by day because of heavy competition among the banks and delay in realization is a common feature. In addition banks have the problems of acquisition of funds from different sources so that it will be typical to spread the banking services to other areas because of heavy maintenance. This research paper basically focuses on how the banking sector growth rate will be improved by adding of technology in the banking operations. It is very typical to spread the banking services through direct channels like establishment or spreading branches to other areas because it is involved much cost and time. When techno-bank products like CBS, ECS, ATMs, Mobile Banking, EFT, E-cheques reduces costs and improves efficiency.

Key words: *Techno-bank products, Core Banking Solutions, Electronic Clearing System, Point Of Sales, Internet Banking and Growth rate*

1. Introduction:

Banking is one of the sectors that the technological improvement is observed and it is even acknowledged by general public these days. The study presents a broad overview of the current state of the technology in banking sector. Information is the important component in the banking operations that information will be effectively monitored and used for decision making. Information technology refers to acquisition, conversion and circulating of all types of information using computer technology and other mediums. Experts say that it will be very typical to introduce new products and services under banking sector but by adding flavor to the existing products in the banking they can improve the market share and also can retention of the customer is possible by using of modern Technology based applications such as Internet banking, Phone Banking, ATMs, E-cheques and also point of sales terminals etc these mediums create good demand for the banking products, at present most of the people are using Banking services like transferring funds, making the payments, mobile recharges through (APPS) Application through Smart phone. The most important of these techno medium in banking is minimizes the banks and customers time as well as

cost. It is very typical to the Banks to spread their branches to different location because it is involved so much of cost and maintenance, Technology adoption removes all these barriers in the banking operations. The burden of direct banking services will be reduced by spreading techno products all the places and even people expected to continue these services in the future also. Technology usage would boost role of banking sector in the financial markets.

Technology will be useful to identify needs and requirements of the customer. Now customer is using virtual banking services to make the transactions with the bank and this situation was different earlier, now it transformed form Manual recording bank transaction to core banking solution is popularly known as CBS(Centralized online real time banking solutions) any where branch banking is possible through CBS. The present Banking Industry is facing the problems like changing the needs, preferences of customers, regulations from Central bank and even technological advancement. The role of banking sector has been spreading to different areas these days to retailing, Industrial units and other avenues. The present innovations in the banking sector are Retail banking, corporate banking, ECS, EFT, RTGS, NEFT, CTS Cheques, Depository participants, Credit cards and Debit card and internet banking, ATM, Mobile Banking etc, now all banks are focusing on these products because of heavy competition among banks in India.

1.2. Innovation products in banking sector

- Arrival of card- based payments- debit card, credit card- late 1980s and early 1990s.
- Introduction of Electronic Clearing Service (ECS) in late 1990s.
- Introduction of Electronic Funds Transfer/ Special EFT (EFT/SEFT) in the early 2000s.
- Real Time Gross Settlement (RTGS) was introduced in March 2004.
- Introduction of NEFT (National Electronic Funds Transfer)as a replacement for EFT/SEFT in 2005/06.
- Plan for implementation of cheque truncation system (CTS) as a pilot program in New Delhi in 2007.

1.3. Migration from cash and cheque based payment system

It has become a necessity to electronic fund transfer system on account of the following reasons:

1. Large volumes of transaction.
2. High cost of physical handling and storage of paper instruments.

3. Delay in realization is a common feature.

4. Finality of payment takes time because the physical movement of instruments in large volumes from branches to and from clearing house, and sorting them according to each bank branch at the center creates problems.

2. Literature review:

Dr. Kanhaiya Singh¹ Transformation is taking in Indian banks from all verticals, and subtle and not – so – subtle makeovers in banking products are dynamically altering the face of banking. The research paper focuses on the way transformation is affecting the banking sector and the way use of IT products have changed the face of banking in India. It reveals current environment of the banking industry; the factors that have brought changes in the industry; and the way these changes have contributed to the development of banking. Their focus is shifting from mass Banking to Class banking with introduction of value added and customized products. Technology now allows banks to create what looks like a branch in a business building's lobby without having to hire manpower for manual operations.

Ilyas Akhisar, K. Batu Tunay and Necla Tunay² Due to the innovative nature of electronic banking services will show the bank performance significantly. Both the analyzing method and involving of developed and developing countries' banking data are the most obvious differences of the study from similar studies in the literature. Result show that bank profitability of developed and developing countries affected from the ratio of the number of branches to the number of ATMs are highly significant and electronic banking services in significant. Results show that some variables were found to be in contrast to the expected negative relationship, because of diversity in the level of development of the countries, the socio-cultural structure and electronic banking infrastructure.

Anitha.K, Saranya.J, Dr.S.Vasantha³: In today's hi-tech world technology support is very important for the successful functioning of the banking. This research focuses on the usage of technology in banking sector. Today banks are the backbone of the Indian economy. Banking in India originated in the last decades of the 18th century. The first banks were Bank of Hindustan (1770-1829) and the General Bank of India (1786). Without information technology and communication we cannot think about the success of a banking sector. It has enlarged the role of banking sector in the economy.

Prof.H.K.Singh, Prof.Amar E.Tigga⁴: Technological innovations witnessed by the banking sector during the nineties have changed the way of business needs to be conducted. IT has introduced new paradigms and is increasingly playing a significant role in improving the services in the banking industry. IT has created transformation in banking sector: Banking structure, Business process, work culture and human resource development.

Seema malik⁵: Indian banking system touches the lives of millions of people and it is growing at a fast pace. Banking industry in India is facing number of challenges like changing needs and perceptions of customers, new regulations from time to time and great advances in technologies. The pressure of meeting these challenges have compelled banks to change the old ways of doing business. The research paper focuses on how the technology has transformed the face of banking in India. India's banking system has seen some major financial innovations in the past decades which lead to tremendous improvements in banking services and operations.

Dr.Neha Yajurvedi⁶: Over the years, the Banking Sector in India has seen a number of changes. Most of the banks have begun to take an innovative approach towards banking with the objective of creating more values for customers and consequently the banks. E-Banking enables the people to carry out most of their banking transactions using a safe website which is operated by respective banks. Various Innovations in Banking and Financial Sectors are ECS, RTGS, NEFT, EFT, ATM, Retail Banking, Debit and Credit cards and many more. With the emergence of Privatization, Globalization and Liberalization in India, Banks are focusing on Research and Development and applying various innovative ideas and technology. There is a close relationship between the development of banking sector and the new innovations in technology and Electronic data processing.

Ibha Rani⁷: Indian banking industry is in midst of IT revolution. Banking industry is backbone of Indian financial system and it is afflicted by many challenging forces. One such force is revolution of information technology. In this Globalized era, technology support is very important for the successful functioning of the banking sector. This research paper focuses on the impact of technology in Indian banking sector. Without information technology and communication we cannot think about the success of banking industry, it has enlarged the role of banking sector in Indian economy. Information technology refers to the acquisition, processing, storage and communication of all types of information by using computer technology and telecommunication system. Information technology is an integrated framework for acquiring and evolving of IT to achieve certain strategic goal.

Kamaleswar Boro⁸ : The objective of this paper is to study the prospects and challenges of technological innovations of banks like ATMS, credits cards, debit cards, internet banking, mobile-banking, ECS, RTGS and Mobile Wallet in North East India. The increasing internet penetration and mobile subscribers in rural as well as urban areas have created a huge opportunity for banking institutions to look beyond traditional form of brick and mortar branch banking. The North East India comprising of 8 states is an important jurisdiction for study agreeing the fact that the region has been neglected and cut from the rest of mainland India due to political, geographical, cultural and socio economic differences.

Prof.N.M.Nair⁹: Liberalization and Information technology has attracted many foreign banks to India, thereby opening up new markets, new products and efficient delivery channels for the banking industry. In the development of Indian Economy, Banking sector plays a very important and crucial role. With the use of technology there had been an increase in penetration, productivity and efficiency. It has not only increased the cost effectiveness but also has helped in making small value transactions viable. It also enhances choices, creates new markets, and improves productivity and efficiency. It has been noticed that financial markets have turned into a buyer's markets in India.

3. Research Methodology

This study is based on the usage and implementation of technology in banking sector in the India and the recent trends and Opportunities in the banking with the help of secondary data collection. The present study is based on the secondary data collected from different journals, magazines, sites and published data from various issues of RBI and different Public sector banks.

3.1 Objectives of the study

- 1) To study the uses of Technology in banking sector.
- 2) To study the elements of Technology in Banking.

3.2. Period of the study

The present research studied with the help of last two years from 2013-14 to 2015-16 and the data collected from RBI website for analysis.

6. Analysis: Present study is based on the data collected form RBI bulletin and other related sources, the aim of the study is to present the innovative products gives the more banking and Para banking services which is shown from the following Table 1.

Table 1

Year	Credit cards Transactions(Volumes)	Debit card Transactions(Volumes)	Mobile banking Transactions(Volumes)
2015-16	752997265	9246152765	394420167
2014-15	619304827	7803732823	171230567
2013-14	512034820	6707096960	94720963

Past Three years data shows the services of on line banking has been increased

Graph1

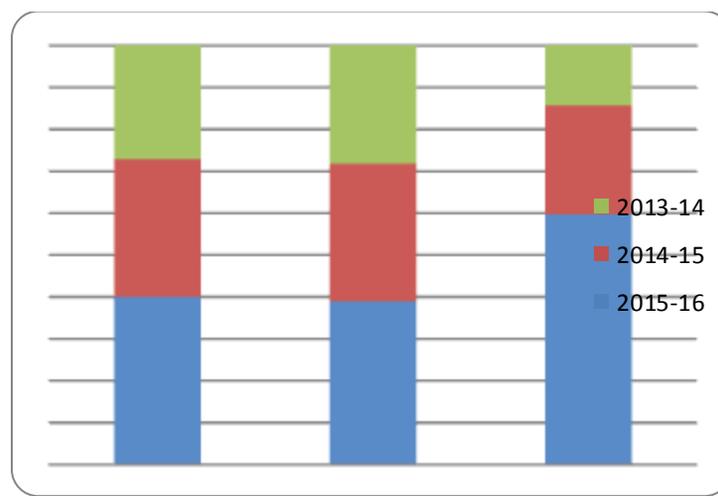
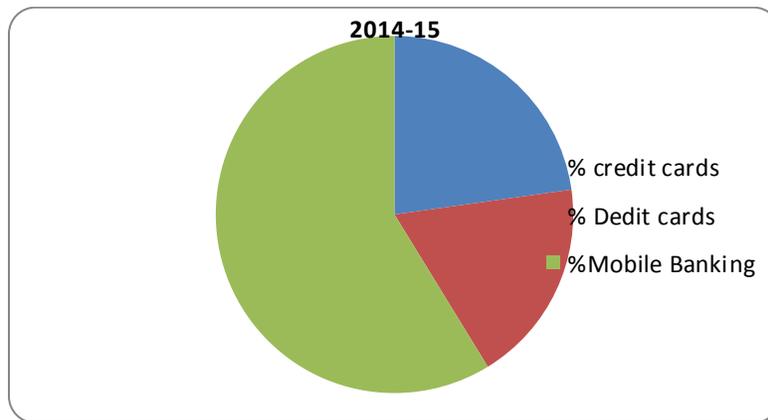


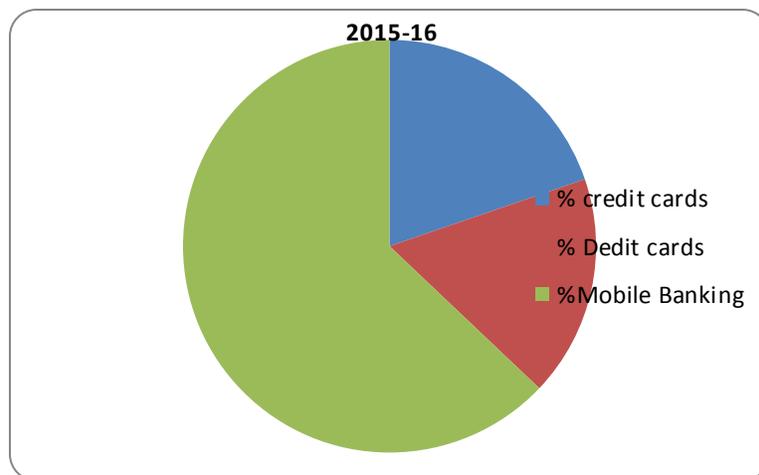
Table 2

Year	Credit cards Transactions	% Change	Debit card Transactions	% Change	Mobile banking transactions	% Change
2015-16	752997265	17.75	9246152765	15.60	394420167	56.58
2014-15	619304827	17.32	7803732823	14.05	171230567	44.68
2013-14	512034820		6707096960		94720963	

Graph2



Graph3



7. Findings:

- Based on the above schedule and graphical form we observed that Credit, Debit and Mobile Transactions percentage is more comparatively previous financial year Banking transactions, in this we can observe the usage of Technology more in Banking sector.
- Increasing in the technology under Banking technology has also improved usage of banking services in case of Mobile Banking by observing of following volumes and percentages because the Mobile banking service is more convenient, securable than other banking services in India.
- The point of sales transactions percentage reduced comparatively ATM and Mobile Transactions due to having technology in the door steps of the customers.

8. Conclusion:

From this study the importance of Technology in banking sector has increased the efficiency and productivity of Banking sector by observing two financial year 2013-14 To 2015-16 taking into three dimensional figures Debit Cards, Credit Cards and Mobile Banking transactions showing into the techno-bank products effected on the banking operations in India.

9. References:

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11. Abbreviations

ECS: Electronic Clearing System
EFT: Electronic Fund Transfer
RTGS: Real Time Gross Settlement
NEFT: National Electronic Fund Transfer
CBS: Core Banking Solutions
CORE: Centralized online real time electronic