

# **A Study on the Impact of Recent Technological Innovation in Banking Sector**

Shreyas K Kutty

*Mcom FA*

*Shreyaskrishnan07@gmail.com*

*Kristujayanti autonomous college Bangalore*

**Abstract:-** Millions of people use banks for various purposes in our country and the banking system of our country is growing rapidly. Though the industry is growing in a fast pace it faces a lot of challenges like changing customer needs, time to time change of government regulation, advancement of modern technology etc. Due to these challenges banks have completely changed the way they have worked and there are tremendous changes in the operations of the banks. This research paper focuses on the how the technological innovation have impacted the banks in India an also focuses on the challenges faced by Indian banks due to the technological innovations.

## **1. INTRODUCTION**

The history of Indian banking can be traced back to 4<sup>th</sup> century BC where Kautilyaarthastra had mentioned about debtors and creditors and also a reference is made on interests on loan which was known asprayogpratyadanam. The traditional banking practices where from the time of Britishers in India and the banking industry of India has been through a long journey which include the reform periods, nationalisation to privatisation and at the current scenario there are lot of foreign banks which is set up in India and there lot more other foreign banks who are looking to set up a branch in India.

Due to the rise in customer demands the banks have to improve their technology to catch up with the fast pace of development and competition. The Indian banking system underwent a huge transformation in the late 90s and early 2000s when a number of innovations in technology changed the way of banking in our country.in1990s it was pronounced that greater focus will be given on technological innovations in banking industry and banks began to use technology to give services to the customer with better quality and even at a greater speed. Technological innovations have made the jobs of both banks and the customers easier customers can do their banking transactions at a very fast rate situated at any corner of the world and even banks can provide services more efficiently and more quickly.

### **Innovations in Indian banking industry**

Innovation is the key for survival for banks in this competitive environment. With the increased competition banks are innovating new products and redefining their processes not only to attract the customers but to retain them. The various other factors like government regulations, tax policies, globalisation, liberalisation,integration with foreign market has led the banks to invest more in technological innovation. The various such

innovations are RTGS, NEFTS, ATM, retail banking, Debit and credit cards, free advisory services, payment of utility bills, fund transfer, mobile banking etc. The customers don't have to wait in long queues any more due to invention ATMS and mobile banking.

- **Net banking:** Net banking is the facility given by banks to customer wherein customers can carry on their banking activities using personal computers and various other devices with the help of internet.This facility allows the customer to be in contact with the bank irrespective of the location of the customers it also makes the banking activity of the customers easier and also avoids the difficulty of physical location.
- **Mobile banking:** Mobile banking is the banking transactions which are carried on with the help of mobile devices that is cell phones, tablets etc. This activity helps the bank to convey any message or informing about any fraudal activities (if any) to the customers. This activity also helps the customers to send money to other customers even abroad from any location at any time. Advantages to mobile banking include the ability to bank anywhere and at any time. Disadvantages include security concerns and a limited range of capabilities when compared to banking in person or on a computer.
- **ATM:** An automated teller machine (ATM) is an electronic banking outlet that allows customers to withdraw cash from their bank account instantly without even visiting an branch. Any customer with a debit or credit card can access and avail the benefits of ATM . The first ATM was set up in London in 1967, and in less than 50 years, ATMs had spread around the globe, securing a presence in every major country and even tiny little island nations such as Kiribati and the Federated States of Micronesia.

- **Credit card:** A credit card is a card issued by a bank which enables the cardholder to borrow funds. The borrowed funds can be used as payment for goods and services by the card holder. The credit card holders have to fulfil some conditions that is the holder will pay back the borrowed amount plus any additional charges. The credit company provider may also grant a line of credit (LOC) to the cardholder which allows the holder to borrow money in the form of a cash advance. The issuer pre-sets borrowing limits which have a basis on the individual's credit rating.
- **Debit card:** A debit card is a payment card that deducts money directly from a consumer's bank account to pay for a purchase. Debit cards eliminate the need to carry cash or physical checks to make purchases. In addition, debit cards, also called check cards, offer the convenience of credit cards and many of the same consumer protections when issued by major payment processors like Visa or MasterCard.
- **RTGs:** RTGS (Real Time Gross Settlement) can be defined as "the continuous (real-time) settlement of funds transfers individually on an order by order basis (without netting)". RTG was introduced in India in march 2004 it is a system where there is continuous and real-time settlement of fund-transfers, individually on a transaction by transaction basis (without netting). 'Real Time' means the processing of instructions at the time they are received; 'Gross Settlement' means that the settlement of funds transfer instructions occurs individually. The minimum amount of remittance in RTG is 2 lakhs and maximum no limit. However the maximum amount is limited to 50000 for cash based transaction and remittance to Nepal.
- **NEFT:** The full form of NEFT is "National Electronic Funds Transfer (NEFT). The NEFT is a nation wide payment system facilitating one-to-one funds transfer. Under this system, individuals, firms and corporates can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country participating in the system. There is no minimum or maximum limit for remittance in NEFT. However the maximum amount is limited to 50000 for cash based transaction and remittance to Nepal.

## 2. REVIEW OF LITERATURE

- **Kaggwa Stella Nakayiza (2013)** the researcher studied about cenetary bank in Uganda. The study discovered that compliance with regulatory requirements involves Centenary

bank abiding by the rules and regulations as provided by the Bank of Uganda as well as its internal rules and regulations as regards to interest rate policies and portfolio management. The study revealed that regulatory requirements at Centenary bank were adequately followed and this was important in ensuring that interest rate risk is adequately controlled under the guidance of the Central Bank. The study revealed that working out problem loans is one step towards loan recovery. It requires giving clients facing difficulty in repaying their loans periods of extension of credit repayment to enable them pay their bills. This further involves credit rescheduling and pursuing guarantors to help pay the defaulted credit. However, the study revealed that the major cause of default in credit recovery starts from the weak internal control systems inhibited by these indigenous banks coupled with the unrealistic returns expected from their loan portfolios which force them to hike interest rates making it very hard for the customers to repay their credit.

- **Gaub and Rithika 2016** from Lucknow studied about the customer satisfaction in the banking sector and compared SBI and HDFC bank. The researchers pinpointed that the customers of both the banks were dissatisfied and customers of SBI were dissatisfied the most. The researchers found that the main reason for this was the employee's behaviour and the inequality of treatment to different customers. The researchers also found that there is no proper queue management. The researchers suggested that there should be better complaint redressal awareness and also more efficient employee training. The researchers also found that there is a lot of stress to the bank employees and suggested that the employees should be given soft skill training.
- **Navneet Kaur 2014** has studied about the customer retention and customer satisfaction in relation to E-Banking in Patiala. The researcher has found that all the customers are important for the bank and the banks are laying extra efforts to bring customer satisfaction to a greater extent. The value of alternate channels is important for the banks to restrain its valuable customers in future. Rules and regulations of bank keep revising. The amount the bank charges for E-Banking facilities are high and banks need to come up with innovative products to reduce the cost of banking operations. Technology adoption has become mandatory for banks to meet customer requirements, improved efficiency and reduce cost. The researcher has also found that creating

a cordial relationship between customers and bank employees helps the banks to restrain the customers for a long period.

- **DR.K.Alagarsamy and S.Wilson 2013** has studied the customer behaviour towards banking service with special reference to public sector banks in Sivagangai district. Banking sector is undergone lot of changes and still changing because of adoption of privatization, globalisation, and liberalisation. It is very important for banks to provide tailor made service for the customers as per expectation. As customer is changing time-to-time the banks are trying hard to keep up with those needs because of the competition.
- **Sara Qadar 2013** has studied about the service quality and customer satisfaction. The researcher suggests the manager should consistently monitor and improve all channel through service pass regularly. He also suggests measuring the employee performance on monthly or quarterly basis and developing a framework for employees by setting example of behaviour and setup reward for it. Market research is necessary task for managers to face the competitors.
- **DR. ManasaNagabhushan** studied about the service quality of banks in India. The researcher stated that banks are focusing more on high net worth customers. The researcher found that reliability of public sector bank is higher than foreign bank. The researcher has found that the private and public bank should work improving their assurance and foreign banks should work on improving their reliability.
- **Vijayaratnam and Kumari (2001)**, explains how the concept of customer relationship has evolved over the last five decades in the Indian banking industry. They state that, between 1950 and 1960, the focus was on serving the customer; between 1960-80, the focus was on 'satisfying the customer'; during 1980-90, the focus was on 'pleasing the customer'; during 1990-2000, it was on 'delighting a customer' and beyond 2000, the focus has been on 'retaining the customer'. Thus banks are now looking for more and more interaction with customers so as to build a healthy and loyal customer relationship.
- **Jham and Khan (2008)** wrote that in today's competitive environment, relationship marketing is critical to corporate success. Banking is a customer oriented service industry where business depends on client service and satisfaction. Thus, banks are compelled to improve customer service and build relationships with customers. The researchers explained in their study, 'Zero Defects: Quality

Comes to Service , observed that sales and profits per account rise along with the longevity of the relationship. Therefore, they advised every bank to improve their customer relationship and retain them for future profitability.

- **Waseem (2014)** studied on the impacts of inflationary trends on banks' performance in Pakistan. The researcher concluded that as inflation increases ROA, ROE and net interest margin of Muslim Commercial Bank Limited, Allied Bank Limited, United Bank Limited and Bank Al-Falah Limited also increases. That is there is a Positive association among inflation and bank performance of this large banking segment of the Pakistan banking industry.
- **Merton and Bodie(2005)** in their paper they found that financial innovation is helpful for ensuring smooth functioning of banks and improves the overall efficiency of the bank by cost minimisation and cost reduction. Financial innovation is the centre of driving factor of economic efficiency.
- **Avasti and Sharma (2001):** in their study analysed that the advancement of technology will change the face of banking sector in India. Technology has transformed the delivery channels of the banks by retail banking. The study also exposed the challenges faced because of technology.

### 3. OBJECTIVE OF STUDY

- To know how the technology have changed the face of banking
- To know the challenges faced by banks in the competitive environment

The below table shows the the total number of ATMs in India during the past 3 year

Year 2016		
Bank	on site	off site
Public banks	82,595	61,858
Private banks	22,501	32,498
Foreign banks	224	746

Year 2017		
Bank	on site	off site
Public banks	85,982	60,442
Private banks	22,105	33,455
Foreign banks	1,773	2,937

Year 2018		
Bank	on site	off site
Public banks	81,080	59,521
Private banks	23,908	33,659
Foreign banks	1,566	1,103

From the above table we can see that in the year 2017 the number of onsite ATMs of public banks

have increased but there is a slight decrease in offsite ATMs. Again in 2018 we can see the public banks have slightly reduced the number of both onsite and offsite ATMs.

We can see that the private banks have removed few of their onsite ATMs and have installed more offsite ATMs. But in 2018 there is a increase in both onsite and offsite ATMs. In the case of foreign banks there is a huge number of both onsite and offsite ATMs installed in the year 2017. But in the year 2018 the number of ATMs have slightly come down.

**Below table shows the total number of customers using debit card and credit cards in India**

Year 2016			
Type of card holder	public bank	private bank	foreign bank
credit card	57,16,479	1,72,79,762	48,96,764
debit card	62,85,39,720	10,17,66,057	36,48,954

Year 2017			
Type of card holder	public bank	private bank	foreign bank
credit card	75,16,139	2,24,37,031	55,43,032
debit card	69,61,32,366	14,12,34,845	51,03,980

Year 2018			
Type of card holder	public bank	private bank	foreign bank
Credit card	92,87,526	2,78,50,196	60,97,644
Debit card	78,11,78,516	15,37,07,195	51,20,709

From the above table it is evident that the number of both credit card and debit card user of all the three kinds of banks that is public, private and foreign banks keep increasing year by year.

**The below table shows the total number of transactions and the total amount transacted by credit card holders in India**

Year 2016		
Bank	No. Of transactions	Total amount (in millions)
Public bank	1,45,872	41,427.3

Private bank	5,59,86,017	1,46,328.4
Foreign bank	2,54,19,196	79,231.3

Year 2017		
Bank	No. Of transactions	Total amount (in millions)
Public bank	22,41,66,766	83,905
Private bank	7,19,47,413	2,40,043.3
Foreign bank	2,98,95,622	98,029.2

Year 2018		
Bank	No. Of transactions	Total amount (in millions)
Public bank	2,69,54,707	99,728.2
Private bank	8,75,26,199	33,269.8
Foreign bank	3,21,65,501	1,08,152.8

from the above tables it is evident that the number of credit card transaction keeps increasing at a very high ratio with the increase in the amount of transaction.

**The below table shows the total number of transactions and the total amount transacted by debit card holders in India**

Year 2017		
Bank	No. Of transactions	Total amount (in millions)
Public bank	78,01,93,183	2,81,079
Private bank	25,92,66,352	8,31,603.1
Foreign bank	1,48,60,458	35,309.9

Year 2018		
Bank	No. Of transactions	Total amount (in millions)
Public bank	90,02,81,265	23,04,619.9
Private bank	29,51,74,126	9,57,908.7
Foreign bank	1,07,20,784	34,699.2

From the above table we can see that amount of debit card transaction is increased in both public and private banks except that there is a slight fall in foreign banks.

From all the tables above we can understand that when bank upgrade their technology the customers increase and banks get more revenue.

**Challenges faced by Indian banks due to technology**

Technology plays a very vital role in development of banks and is very necessary for to keep up in this competitive world there is no doubt about it. But technology also gives some challenges to the banks. In a developing country like India it is highly impossible to all the people to enjoy the benefits of technology. When we speak about Indian banks it is a challenge for Indian banks to compete when foreign banks play in Indian market with their foreign upgraded technology, but Indian banks are managing to meet the customer expectations. In today's world IT sector is developing at a fast ratio and every day we can see some new technology coming out. Keeping up with this pace is a very big challenge to the banks. Another challenge faced by banks due to technology is the privacy concerns of the customers banks have to find ways to make their transactions more and more secure.

#### **4. CONCLUSION**

India is one of the top economies in the world there is no doubt that banking sector is improved a lot due to the technological advancement the ATMs have doubled in the past few years and is expected to double in the coming future. Today mobile banking and internet banking have made banking activities so much easier and it has a very big scope in the future. Customer satisfaction is the prime factor for growth of the bank. So banks have to adopt to technology considering the customer satisfaction.

#### **REFERENCES**

- [1] [www.rbi.co.in](http://www.rbi.co.in)
- [2] A report on trend and progress of banking sector in India.
- [3] A journal "management of banking and financial system".
- [4] A journal "recent trends in banking industry. IT emergence.