

**Impact Of Technology In Banking And Financial Services Sector  
– A Critical Analysis**

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**Abstract**

Gone are the days when banks had stipulated working hours. Banking services were limited in number and to avail these services, customer had to visit the branch of the concerned bank. Traditional banking system had monopolistic characteristics. There were only government banks and then in the year 1969, there was nationalization of almost all major banks in India. There were around 13 private banks operating in India even prior to the year 1968. The major changes started emerging with the establishment of ICICI Bank Limited in private sector in 1994. There are 21 private banks and 12 public sector banks operating in our country, as on date, along with one state owned payments bank. This banking network provides a number of banking and financial services but then there are other financial institutions which are also engaged in providing n number of services to the customers. Computerization in banking industry set in early 90s and since then banking and financial services sector has envisaged complete digital revolution. Banking and financial services industry has under gone a metamorphosis since then. Technology in banking and

financial services sector has totally changed the face of this industry. Technology has invaded in almost all operational procedures of banking and financial services industry may it be receiving a small request or delivering a specific service. Technology has entered into almost all the operational spheres of banking and financial services industry. Technology has also helped this industry to offer new services to its customers. It is not that technology has contributed positively only to this industry but it has disadvantages as well. In the following paragraphs, the role of technology in banking and financial services and advantages and disadvantages of technology in this sector are discussed.

**Keywords:** Technology, banking, financial services, e banking, techno banking, mobile banking, dematerialization, cards, e money, e wallet.

## **Introduction**

Banks were visualized as large buildings having different counters for various services. Even the banking services were also limited. The customers use to visit the branch of their bank and stand in queues, either to deposit money or to withdraw money. Another service customers were going to bank for was to get a demand draft. There were not many financial services available to the customers. Banking hours were limited and customer had to be physically present at the counter of the branch of the concerned bank to avail the services. These are the stories of yester years. Today, banking and financial services are at the tips of the fingers. This has been made possible due to technological advancements in our country. Technology, in common parlance, is application of some technique in the process of manufacturing a product or delivering the service, which helps in saving of resources and eases the whole process. Technology is application of knowledge into practicability. Use of technology is always for betterment. Technology usually replaces some manual procedure. Technology also refers to induction of newer procedures of performing a task, which are

helpful in mechanizing the whole task. The use of technology should initiate saving of time, monetary resources or human efforts. Use of technology should contribute to increase the efficiency and effectiveness of the process. The use of technology should also decrease per unit cost in long run. If the use of technology does not decrease cost, the benefit derived from it should be massive. Technology is being utilized in almost all spheres of life. With scientific development, it is not possible to avoid technology now-a-days. Use of technology decreases the stress in the process and increases the comfort of the performer. Technology has changed the face of many industries and so is the case of banking and financial services sector. The technology has played a major role in easing the banking and financial services transactions during the last decade.

The development of internet and World Wide Web gave way to numerous changes in the banking and financial services industry. Whatever we are envisaging today, in the banking and financial services industry is the outcome of enormous technological changes.

## **Positive impact of technology on banking and financial services industry**

Whenever the impact of technology on banking and financial services needs to be discussed, it can be broadly divided into two categories, its impact on the bank and financial services provider and its impact on customers. From the view point of bank it would be operational aspects and from the view point of customers it would be services and satisfaction. From the side of bank as well as customers, following improvements can be considered as the positive impact of technology on banking and financial services sector:

### *Automation of banking operations:*

The very first change was seen with the computerization of banking and financial services industry. With this the operations of this industry were automated and the manual

procedures got reduced. This resulted in savings of resources, in terms of time and money. It also helped in reducing per transaction cost of many operations. Another major positive change was the development of single window for all banking services. The computerization of banking industry made it possible. The banking procedures got faster and there was saving of time.

### *24 X 7 banking hours:*

The shift from limited hour branch banking to 24 hour banking became possible due to introduction of Automated Teller Machine (ATM), Cash Deposit Machine (CDM), Multi-tasking Banking Kiosk (MBK) etc. All these mechanical facilities helped the banking industry to work on 24 X 7 basis as no banking staff is required to operate these machines and customers themselves operate these machines, to receive the specific banking service. The customer got rid of counter based services and now could enjoy banking services at any hour of the day, as per his convenience.

### *Core banking solution (CBS):*

With the invasion of technology in banking and financial services industry, Core Banking Solution became possible. Traditionally, banks use to collect money, take fixed deposits, provide demand draft, custodial services etc. There were limited services offered by banks. A large range of services are being offered by Core Banking Solution. CORE stands for 'Centralized Online Real-Time Exchange'. In this system the branches of the banks can access data from the centralized system and hence the customers can avail the services irrespective of their bank branches. CBS has helped the banks as well as customers to achieve efficiency and accessibility.

## *NEFT/RTGS/IMPS:*

Facilities like National Electronic Fund Transfer, real-time Gross Settlement and Immediate Payment Service have been made possible through the use of CBS. These services are the methods to transfer money from one party to another party. There is minimum use of cheques and demand draft these days as online money transfer facilities are more convenient and faster.

## *E banking/Internet banking:*

Development of internet and World Wide Web gave way to internet banking. Doing banking transactions over internet proved as a great facility to the customers as it curtailed the number of transactions drastically. Previously, the money transfers could be done through bank branch only. Now, customer can transfer money using internet banking. This is a form of e banking. The number of internet users in India is about to touch 627 million which means that there is ample scope of internet banking in India. Till date, less than 40% Indian population is using internet. As the number will increase, users of internet banking will increase.

## *Enhanced geographical reach:*

Technology has enabled the banking and financial services industry to flourish beyond geographical boundaries. There is no need for the bank now to establish a branch everywhere as the customer can access the banking services through internet or mobile.

## *Phone banking / Mobile banking:*

Increasing use of smart phones in our country has made it possible that customers can access banking services using their mobile phone. This facility has eliminated the need of a

desk top or laptop also, for accessing the banking services. Phone banking has made the banking and financial services accessible through landline phone or simple mobile phone by calling the branch of the concerned bank. Trading of instruments can also be done in the same manner. There are around 800 million mobile users in India which are bound to increase and thus the utility of apps of banks and financial institutions will also increase.

### *E money/e wallets:*

Use of technology has introduced newer financial services in the Indian economy. One such service is e money and e wallets. Using e wallet does not require physical currency. This automatically reduces the requirement related to physical currency and ultimately results in saving of national resources.

### *Improved communication:*

With the advent of technology in banking and financial services sector, it has become possible for the bank to share information of each and every transaction with the customer, electronically. A system generated SMS and email is sent to the customer as soon as the transaction takes place. There is no need to maintain a pass book, these days. Marketing and advertising is also being done through SMS and e mails, by the banks and other financial institutions.

### *Newer products:*

With the development of technology, newer financial products have hit the market. Especially, the loan products have gained popularity during recent years. Many types of loans have been introduced in the market, as per the requirement of the customers. The customers were never offered consumer loans before the advent of technology in financial services

sector. An example of such new product is bancassurance. Bancassurance is selling insurance through banks. This way, bank's already existing large customer network is used for selling insurance.

### *Emergence of new organizations:*

Technology has allowed newer organizations to enter in the banking and financial services sector. Companies like Paytm, Bajaj Finserv, Muthoot Finance, Au Financiers, Manappuram Gold etc. are either new organizations in the market or have introduced newer products as per the market demand. Payment banks have also emerged in the economy. Even the Indian government has started selling Sovereign Gold Bonds online. These bonds relieve the customers to carry gold in physical form.

### *New applications:*

There is introduction of new mobile apps to take advantage of technology and to access receipt and payment services of the banks and other financial institutions. For example, UPI BHIM , PhonePe etc.

### *Dematerialization of physical documents:*

Technology has made it possible to dematerialize the documents like shares, debentures etc. This means that now there is no need to carry documents physically. No need for companies to mail the documents as shares and other instruments can be virtually stored in the holder's account. Dematerialization has also pumped the trading of equity shares, mutual fund units and other such tradable instruments.

### *Online trading:*

It is because of the technology only that the online trading of shares and other such instruments is possible today. Previously, trading of such instruments was to be done physically only and it was not an easy task. Moreover, common man could not participate in it due to lack of expertise. Today, scenario has changed. Anyone can trade in these instruments after getting a little bit of training. This technological innovation has given a boost to the investment in shares and other such instruments.

### *Trading in fraction:*

Previously, the trading of instruments was done in whole numbers only but with the dematerialization it is possible to trade in fractions now. This has encouraged trading in those instruments which have higher market price which was not possible previously.

### *Instant transfer:*

In past days, the transfer of ownership after the transaction was a time taking task but with the introduction of technology, the transfer has become instant from the account of the seller to the account of the buyer.

### *Enhanced accessibility:*

Another positive impact of technology on banking and financial services sector is that various banking and financial products are now in easy reach of the customers which was not like this, in traditional system. Technology has made the procedures simple and various investigations related to the customers can now be done online. For example, each customer can be verified as per his CIBIL score, which is available online.

### *Increased customer data base:*

Technology has helped the banks and financial institutions to increase their customer base manifold. In case of providing services to the customers physically, the number of customers that can be served is limited but in case of providing banking services on online basis the number of customers can be unlimited or at least the number is far more than the number in case of branch services. With companies managing the data base of customers, cross selling is also being done now.

### *Decreased service time per customer:*

Using technology in banking and financial services has actually decreased the service time per customer. Availing banking services online is in fact is more customer oriented and the activities are time bound otherwise the account gets signed out due to security reasons. This way the transaction time per customer is reduced substantially.

### *Ease in use of cards:*

With the technological advancements, there is a surge in use of cards like debit cards, credit cards, EMI cards etc. It is the ease of use of these cards that has encouraged the customers to use these cards more frequently. Cash requirement is drastically reduced if the payment for different utilities is done using cards.

## **Negative impact of technology on banking and financial services industry**

Very coin has two sides. It is not that the technology has contributed positively only, to the banking and financial services sector but there has also been some negative impact of it on this sector. Technology has taken its toll in this sector as well. Following can be considered as the negative impact of technology on banking and financial services sector:

### *Changed nature of employment:*

This industry now does not require counter personnel. The manpower demand in the banking and financial services industry has shifted to technical personnel who can maintain the large techno based infrastructure of this industry. It also requires Digital Marketing Experts, Digital Product Developers, IT Experts etc. This way the demand has shifted to the requirement of the manpower possessing a different skill set.

### *Huge investments:*

In order to adopt the technology, huge amount of investments have been made by banking and financial services sector to create the supporting infrastructure. There has been one time investment in creation of infrastructure and there is ongoing expenditure in maintenance of this basic machinery. This investment has increased the asset base of banking and financial industry, returns being the same though it has helped in reducing the accessibility time and transaction time drastically. There is reduction in variable cost per transaction as well. On the long run this would affect the quality and quantity of man power requirements in this industry.

### *Notion of exposure:*

Usually the investors think that online transactions are not that much safe as compared to the physical transactions. Customers feel that their account and transactions are open and exposed on the internet and visible to anybody and thus their money is not safe. Although, banks are using triple layer security system for e banking, frauds have been taking place which gives strength to the thinking of the customers that online banking is not safe.

### *Chances of pilferage, theft etc.:*

The chances of fraud, theft, pilferage etc. have increased while carrying large amount of cash to feed in ATMs or while collecting cash from CDMs. Even the incidences of breaking the ATMs and CDMs have also increased in recent times. As there is large amount stored in the ATMs and CDMs, there are more chances of ill acts.

### *Dependency on internet services:*

A limitation of all these technological advancements is that e banking is dependent on internet facility except for phone banking. Internet banking or mobile banking also need internet. If the internet services are not available, the customer can not avail any service. Even online trading requires basic minimum infrastructure.

### *Need of desk top / lap top / smart phone:*

To access new age banking and financial services, there is requirement of desk top, lap top, smart phone etc. It is not possible to access these services in the absence of these equipments. The customer also needs to purchase these equipments in order to access the banking and financial services.

### *Dependency on electricity:*

All those equipments mentioned above need electricity to operate. Such equipments cannot be operated in the absence of electricity and thus, to take advantage of the technology, basic infrastructural needs need to be fulfilled.

## **Conclusion**

Technology has played its role in making our lives comfortable in almost all spheres. Same is the case in banking and financial services industry. Technology has eased the procedures of providing and receiving services in banking and financial services sector. The

traditional branch banking has been replaced by virtual banking based on technology. Almost all banking services can now be accessed online. The role of bank branches is diminishing day by day. Except in the case of custodial services there is not much requirement for the customer to go the branch of the concerned bank. Newer financial services have also been introduced in the market and technology has also helped this industry to save on time. Customers have also been benefitted in terms of saving in time, energy and resources as technology has allowed them to access almost all banking and financial services online. With few limitations, it can be concluded that technology has helped the banking and financial services sector to flourish and grow at a faster rate. Even the customers are also enjoying the advantages of technology, in receiving the banking and financial services at their desk or using phone or mobile phone. Thus, the technology has helped this sector in more than one way.

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## **References:**

1. Shrotriya Vikas, Credit Card: A Tool to Enhance Purchasing Power, International Journal of Research and Analytical Reviews, Vol 6, Issue 1, March 2019.
2. Pallavi Singh Yadav, & Dr. Raj Kumar Thathera. (2019). Impact of Non-Performing Assets (NPAs) on Assets Turnover Ratios of Punjab National Bank Limited. *Think*

- India*, 22(14), 693-709. Retrieved from <https://journals.eduindex.org/index.php/think-india/article/view/12408>.
3. V Shrotriya, *Alternative Banking: The Emerging Trend*, Professional Banker, July 2007, ICFAI University Press.
  4. Vikas Shrotriya, *Techno Banking – The Gateway to Market Leadership*, November 2011, ICFAI University Press.
  5. Popli G. S. and Anuradha Jain, *Principles and Systems of Banking*, Kindle edition, PHI Learning.
  6. Muraleedharan D., *Modern Banking – Theory and Practice*, 2<sup>nd</sup> edition, PHI Learning.
  7. Parmeswaran R. and S. Natrajan, *Indian Banking*, Kindle edition, S. Chand and Co.
  8. Nalini Prava Tripathy, *Financial Services*, 1<sup>st</sup> edition, PHI Learning.
  9. Bharti V. Pathak, *The Indian Financial System: Markets, Institutions and Services*, 3<sup>rd</sup> edition, Pearson.
  10. Nayak N., *Emerging Scenario of Indian Banking Sector*, 2012, Ssdn Publishers and Distributors.
  11. Uppal R. K., *Banking Services and Information Technology: The Indian Experience*, 1<sup>st</sup> edition, New Century Publications.
  12. Firdaus Temurasp Shroff, *Modern Banking Technology*, 2007, Northern Book Centre.
  13. Richa Baneerjee Dr., Dr. Bhuvana Venkatraman and Prof. (Dr.) Bimal Jaiswal, *Financial Markets, Institutions and Financial Services*, Sahitya Bhawan Publications.

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