

# EMERGING TRENDS IN BANKING SECTOR IN INDIA

*(With Special Reference to Banking Technology)*

Kathiriya Priyanka

Research Scholar

Bhakta Kavi Narsinh Mehta University, Junagadh

## ABSTRACT

The Financial sector, of which Banking sector is the largest player, plays a dominant role in building the economy of an individual as well as a nation. Banks have control over a large part of the supply of money in circulation. They are the main stimulus for the economic progress of a country. 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. With the emergence of Privatisation, Globalisation and Liberalisation 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. The present paper focuses on major technology trends and innovation in banking.

## INTRODUCTION

Today Indian banking Sector is a flourishing Industry; it's mainly focused on new Banking technological innovations. Banks created to use technology to provide effective quality and services to the customer and get high speed. Innovation in banking technology is driven by the constantly evolving customer expectations and internal business mandates. Customer behavior patterns have shifted over the last couple of years and the focus now is on instant fulfillment – be it for account opening, transactions (financial/nonfinancial) or problem resolution. Customers today demand a 24x7 consistent access to systems and services, with the fastest transaction processing possible. In the recent scenario has been changed, there are around 340 banks are working in India, in which are public and private banks. Today all the banks started with the different channels, like ATM, Credit Cards, Debit Cards, Mobile Banking, Internet Banking, etc. But Net Banking made it an easy way for customers to do their banking transaction from various places. In 2020 India's banking sector is a fifth largest banking sector.

## OBJECTIVES OF THE STUDY

- To study the emerging trend of banking technology and innovation.
- To study the challenges faced by Indian banks in the changing scenario.

## DATA COLLECTION

The study is descriptive in nature and is based on secondary data. The data are collected from various reports, journals, news articles, various bank portals, RBI portal and internet sources.

## TECHNOLOGY AND INNOVATIONS IN BANKING:

Technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry. The various technological platforms provided by the banks to its customers bring greater flexibility and operational convenience by providing computerised banking environment. Major technology and innovation banking sector in India are:

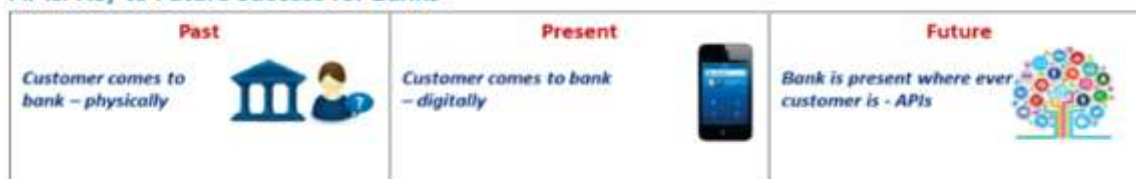
- APPLICATIONS PROGRAMMING INTERFACE(API)
- Innovation Labs
- UPI
- Digital Wallets
- Wearable Technology
- The 3 Big B's
- Real time gross settlement(RTGS)
- National Electronic Funds Transfer (NEFT)
- Electronic fund transfer
- Point of sale (POS)
- Electronic Clearing Service (ECS)

Now , discuss about technology and innovation in detail as under:

#### ❖ APPLICATIONS PROGRAMMING INTERFACE(API) :

An API (Application Programming Interface) is an interface that allows to synchronize, link and connect the database of service with any application. Their implementation in the banking system is basically the same: they link a bank's database (its customers' information) with different applications or programs, thus forming a network encouraging the promotion of services, payments, and products appropriate to each person. Its benefits range from cost reduction, optimization of services, reduction of time spent on transactions, increased revenue and facilitation in all the needs of those who accept it.

APIs: Key to Future Success for Banks



#### ❖ Innovation Labs:

Many banks have adopted proactive strategy by establishing their own internal innovation labs. Innovation labs operate with the primary objective of evaluating and adopting emerging technologies and contribute to bank's motive of digitalization.

Eg: AXIS Bank has set up its Innovation Lab named Thought Factory

#### ❖ UPI :

National Payments Corporation of India (NPCI) launched Unified Payments Interface (UPI) in 2016 with 21 member banks. UPI is a system that powers multiple bank accounts into a single mobile application, merging several banking features and seamless fund routing. UPI has been considered as the revolutionary product in payment system.

Example : BHIM app,Google Tez,Paytm,SBI Pay,BOB UPI,Axis Pay

#### ❖ Digital Wallets :

Digital Wallets allow an individual to make electronic transactions using a smartphone. Awareness and use of e-wallets increased post demonitisation in India. It is indeed one step towards "less cash" economy.

Example : mRupee, ICICI Pockets,HDFC PayZapp,Citi MasterPass,YONO SBI

#### ❖ Wearable Technology :

"To wear your bank on your wrist" is a reality today. Smart watch banking helps the customers check their balance, get fraud alerts, carry out both financial and information transactions and offers many more services, all on their wrist.

In India, ICICI has launched an app named iWear for all smart watches. ICICI is among few global players allowing transactions using this app on both Apple and Android platforms. As technology is redefining banking, wearable banking and transactions via smart watches and smart glasses is gearing up as a key trend.

❖ **The 3 Big B's :**

The 3 Big B's prominently trending today in Indian banking sector are Biometrics, Blockchain and Big Data Analytics.

1) **Biometrics :-**

Biometrics technology makes use of biological data and behavioural characteristics that differentiates one human being from another. Biometrics is secure and cost effective method for authentication process of the customers of the bank. It eliminates the burden of remembering passwords, PINs and card numbers.

**Biometrics application in banking sector**

Biometrics type	Example
Fingerprint	DCB has set up ATMs in Bengaluru, Mumbai, Chennai that require fingerprints to withdraw money. The ATM operates using Aadhaar card data and links a customer's fingerprint data with his Aadhaar biometric details. HDFC is reaching out to rural areas with micro ATMs (handheld device). Fingerprints are used for instant authentication.
Voice Recognition	ICICI Bank introduced voice recognition for its customers to transact smoothly through the bank's call center. Voice of the customer acts as the password.
Face Recognition	Federal bank has introduced zero balance selfie account which uses an app (Feedbook), scanned PAN, Aadhaar details and a selfie to open an account instantly. App gets converted into a passbook once the account is opened.

2) **Blockchain:-**

A blockchain is a data structure that is used to create a digital ledger of transactions and share it among a distributed network of computers. The underlying principle used is cryptography, wherein each participant on the network is allowed to manipulate the ledger in a secure way without the need for a central authority.

**Present day applications in India**

In October 2016, ICICI Bank carried out India's first international trade transaction and overseas remittances using blockchain technology. ICICI partnered with Dubai's largest bank Emirates NBD for this project. AXIS Bank and YES Bank too are working on blockchain technology.

3) **Big Data Analytics :-**

Big Data are said to be extremely huge data set that has to be analysed, handled, managed and validated through typical data management tools. Indian banks have millions of customers. The data of these customers is stored in the database. Retrieving the data in meaningful manner becomes a complex process as many times the data collected is unorganized. Big Data Analytics helps in resolving this problem.

To achieve competitive edge in today's modern banking era, banks in India are using data analytics to attract new customers, retain them and make the entire process consumer centric.

❖ **Real time gross settlement(RTGS):**

Real time gross settlement is a fund transfer system. Settlement in "real time" means the transactions happen almost immediately "grosssettlement "means transaction is settled one to one basis. This is mainly used for transaction which high in value and need to be cleared immediately.

Real Time Gross Settlement system, introduced in India since March 2004, is a system through which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. The RTGS system is maintained and operated by the RBI and provides a means of efficient and faster funds transfer among banks facilitating their financial operations.

### ❖ **National Electronic Funds Transfer (NEFT):**

According to Reserve Bank of India, National Electronic Funds Transfer (NEFT) is a nation-wide payment system to facilitate one-to-one funds transfer. Under NEFT, 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 Scheme. The funds under NEFT can be transferred by individuals, firms or corporates maintaining accounts with a bank branch. Even individuals not having a bank account can deposit cash at the NEFT-enabled branches with instructions to transfer funds using NEFT. However, such cash remittances will be restricted to a maximum of Rs.50, 000/- per transaction. Such walk-in-customers have to furnish full details including complete address, telephone number, etc. NEFT, thus, also help in transfer of funds even without having a bank account. This is a simple, secure, safe, fastest and cost effective way to transfer funds especially for Retail remittances.

### ❖ **Electronic fund transfer:**

It is a system of transforming money from one bank account direct to another without any paper money charging hands. Direct deposits are one of the most widely used EFT program. It refers transfer of funds initiated through on electronic terminal, including credit cards, ATM, and point of sale transactions. It used for both credit transfer and debit transfer. Electronic fund transfer transactions are processed through the automated clearing house network. The growing popularity of EFT for online bill payment in paying the way for paperless universe where checks, stamps, envelops, and paper bills are obsolete. Through EFT administrative costs should be reduced, increase efficiency, simplified bookkeeping and greater security.

### ❖ **Point of sale (POS):**

Point of Sale Terminal is a computer terminal that is linked online to the computerized customer information files in a bank and magnetically encoded plastic transaction card that identifies the customer to the computer. During a transaction, the customer's account is debited and the retailer's account is credited by the computer for the amount of purchase.

### ❖ **Electronic Clearing Service (ECS) :**

Electronic Clearing Service is retail payment systems that can be used to make bulk payments/receipts of a similar nature especially where each individual payment is of repetitive nature and of relatively smaller amount. This facility is meant for companies and government departments to make/receive large volumes of payments rather than for funds transfers by individuals.

## **CHALLENGES**

### • **Automation and AI may lead to unemployment**

AI and automation are the major breakthroughs of today's innovation era. Although the benefits are promising, technology revolution poses a great threat to many of the jobs which will be completely automated and opportunities for job seekers will shrink. Banking is no exception to this fact.

### • **Voice Revolution will takeover online banking**

As voice recognition and voice authentication mature, web traffic to banking sites and mobile applications may drop by 50% in next few years. Customers will simply TALK to an internet connected device and perform most common banking tasks within few seconds. Drop in web traffic due to voice recognition systems could pose a serious threat to banking industry. The customers who currently visit the websites for banking tasks, also go through the marketing promotions on the site. The banks may lose the opportunity to cross sell current customers with drop in web traffic.

### • **Issues related to Biometrics**

Operational issues – A minor could change the voice quality and may pose problems in speech authentication. People who work in labour intensive jobs may have damaged fingerprints. Even the senior citizens may have problem in fingerprint authentication.



- **Security issues**

In its note on 'Digital Payments - Analysing the cyber landscape', KPMG mentioned, cybersecurity is one of the most critical challenges faced by stakeholders of the digital payment ecosystem. With more and more users preferring digital payments, the chances of getting exposed to cybersecurity risks like online fraud, information theft, and malware or virus attacks are also increasing. Lack of awareness and poor digital payment ecosystem are some of the primary reasons that have led to increase in these attacks.

- **Digital literacy in rural areas**

There has been considerable growth in the users of smartphone in rural India in last few years. But not many are aware and confident about online banking through smartphones. The primary usage of smartphone is restricted to entertainment and communication only. As the urban tech savvy customers adopt the changing landscape of ICT innovation in banking, Indian rural population yet needs to be educated about the concepts of AI, Biometrics, Blockchain, Big Data etc.

## CONCLUSION

An upgradation of technology banks are playing vital role in economic development. Banking sector in India is resulting with increased growth in customers. By providing innovative facilities of banks. The changes made by banks are mostly focused on financial inclusion for expansion into rural areas and bringing stability by boosting credit growth making banking services near to the customer directly and reducing customer valuable time.

The current trends in banking are building blocks of the “Cashless Economy”. Though there are few challenges, technology will keep evolving and with collaborative efforts of Banks, Government and end users, overcoming these challenges will certainly be possible. The initiative of Government of India will very soon achieve its mission and rural India too would be “digitally literate”. Banks will have to develop a strategy to bridge the gap of technology in rural banks and urban banks. Today, Indian banking industry is on the threshold of “next generation banking”. ICT innovation clubbed with dream of “cashless economy” will certainly bring about metamorphosis in the banking sector.

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