



Digitalization in Banking Sector

Mrs Jyoti Suraj Harchekar

Assistant Professor, Tilak Maharashtra Vidyapeeth, Pune, Maharashtra, India

ABSTRACT

In order to improve the customer service, book-keeping and MIS reporting, the need for computerization was felt in the Indian banking sector in late 1980s. Reserve Bank of India set up a Committee headed by Dr. C. Rangarajan on computerization in banks in 1988.

Conversion of data into a digital format with the adoption of technology is called as digitization. By implementation of digitalization, banks can provide enriched customer services. This provides convenience to customers and helps in saving time. Digitalization decreases human error and thus builds customer reliability. A new wave of technology is revolutionizing the way customers engage with their finances. From social to mobile capabilities, banks have to rethink the way they do business to deliver a better customer experience and remain competitive. The recent introduction of open banking and the Payments Services Directive 2 (PSD2) regulation is hastening this transformation by placing power in the hands of customers. Banks must now allow customers to share their financial data, such as spending habits and regular payments, with authorized third-party providers if customers wish to do so.

In addition, until the past few years, banks were not visualizing the tremendous shift in consumer behavior that occurred as a result of the millennial generation now become the largest consumers of financial products. With the increasing usage of smart-phones, digitization of banking sector is predictable to catch up the increasing expectations of the world. It indeed reduced human errors and increased convenience. Now, cyber threats are on the rise hence, banks must be very vigilant and should be prepared to handle cyber-attacks.

KEYWORDS: Digitalization, Internet Banking, Online Banking

I. INTRODUCTION

Digitalization is the process of transforming information into a digital format, in which the information is organized into bits. The result is the representation of an object, image, sound, document or signal (usually an analog signal) by generating a series of numbers that describe a discrete set of its points or samples. The result is called digital representation or, more precisely, a digital image, for the object, and digital form, for the signal. The digitized data is in the form of binary numbers, which simplify computer processing and other operations. Digitizing simply means the transformation of analog source material into a numerical format; the decimal or any other number system that can be used instead.

Digitization is of vital significance to data processing, storage and transmission, because it "allows information of all kinds in all formats to be carried with the same efficiency and also intermingled". Unlike analog data, which typically suffers some loss of quality each time it is copied or transmitted, digital data can, be transmitted with absolutely no deprivation.



Diagram 1: 5 Key Banking Technology Trends

Information Technology was implemented by banks initially with the introduction of standalone PCs and voyaged to Local Area Network (LAN) connectivity. Further, Core Banking platform was adopted by banks. Thus branch banking changed to bank banking. Core Banking Solution (CBS) facilitated banks to increase the comfort feature to the customers as a encouraging step towards improving customer accessibility through anywhere and anytime banking.

Different Core banking platforms such as Finacle designed by Infosys, BaNCS by TCS, FLEXCUBE by i-flex, gained popularity.

In 1991-92, with the opening of the economy, the process of Computerization gained a leap. Several commercial banks started moving towards digital customer services to remain economical and significant in the race.

Dan Jones, partner and head of Capco's UK Digital practice, says convenience, speed and flexibility are no longer considered attractive add-ons, but have become a standard expectation of the rapidly changing customer-bank relationship. According to Mr Jones, successful organizations will be those that can keep pace with customer needs and demands, and implant appropriate services into the wider ecosystem of digital products.

II. Research Methodology:-

Research paper is based on secondary data obtained from various sources like

1. Earlier paper published.
2. Websites
3. Articles published in Research magazines.
4. Articles appeared in news paper.

Current status in the Digital Space

Indian Government is aggressively promoting digital transactions. Some of the significant steps for innovation in the Payment Systems domain are the launch of United Payments Interface (UPI) and Bharat Interface for Money (BHIM) by National Payments Corporation of India (NPCI). UPI is a mobile interface where people can make immediate funds transfer between accounts in different banks on the basis of cybernetic address without mentioning the bank account. Today banks aim to provide fast, accurate and quality banking experience to their

customers. Today, the topmost agenda for all the banks in India is digitization.

Difference between Online and Digital Banking

For the most part, these two words are alternatives. But, online banking can be defined a bit more narrowly as- online banking primarily emphasizes on money transfers, bill pay, remote deposits, and basic online management of accounts. Other synonyms for online banking include virtual banking, internet banking, and e-banking. So, online banking focuses on digitizing the "core" features of banking, but digital banking incorporates digitizing every program and activity undertaken by financial institutions and their customers.

Banks play a significant role in our daily lives. For countless people, at least a single financial transaction is been done in a single day. Thus banks always try to implement latest technologies to enhance customer experience. Digitization is not a choice for banking industry, rather it is certain because every industry is being digitized and banking sector is no exemption. Mobile banking is increasing at a fast pace more than online banking.

ADVANTAGES OF DIGITIZATION IN BANKING:-

- Reduction of costs for banks and customers as well by using cashless transactions, ATMs, etc.
- With more digital data available with banks, they can take data-driven vibrant decisions by using digital analytics. This benefits both customers and banks.
- Number of customers will be amplified for banks because of the increased convenience of banking.
- Digitalization decreases human error.
- Need of handling large amounts of cash will be reduced.
- Rural and urban gap will be eliminated.
- Fake currency threat will be reduced, with the increasing cashless transactions.

DISADVANTAGES OF DIGITIZATION IN BANKING:-

- Digitalization shrinks the effort of employees and hence results in loss of jobs.
- Some bank branches may conclude to exist with the increasing use of online banking.
- Banks will be more vulnerable to cyber-attacks.

- No one can hide crores of rupees in banks and just act middle class. Privacy may have to be compromised.

III. TECHNOLOGICAL DEVELOPMENTS IN INDIAN BANKING

Digital Collaboration

We will be part of our not-so-distant future when we expect driverless cars and robots, it should be equally direct for us to visualize a future banking system with its own form of artificial intelligence (AI).

AI-enabled tools such as chatbots have been already implemented by banks to interact with customers, but that is just the point of what is to come. AI has the potential to modify organizations on an extraordinary scale, from virtual financial assistants to computerized credit scoring and predictive analysis.

Mr. Jones explains: “From a customer point of view, machine-learning is starting to enhance their experience in smart ways, quickly and efficiently resolving their problems.

Machine-learning and AI will allow banks to spot outlines and solve customer problems at a segment of the current speed in a very cost-efficient manner. This second wave of interruption will have a powerful influence, transforming the banking industry and with it the customer journey. Banks should seize the opportunities, when technology presents to shift to the next gear. Because time does not wait for any organization, people including banking sectors.

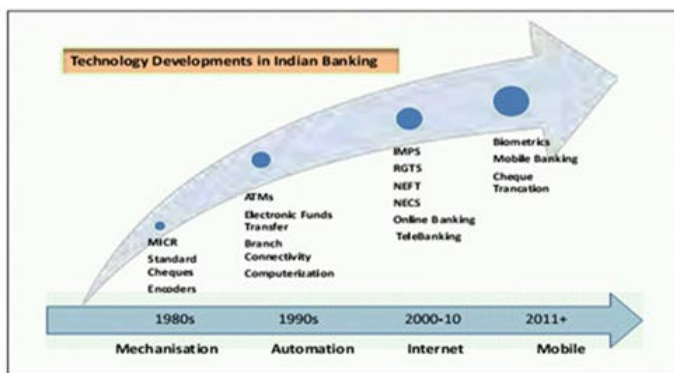


Figure2: Technological Developments in Banking

Few Trends and Opportunities:

1. Changing consumer behavior in favor of digitalization

As the market is exposed to unsettling digital services, it is now putting its hands on changing client preference from traditional banking to its

digitalization. Also, India’s demographic share is well suited to switch to digital behavior, with the median age of an Indian expected to be 29 years by 2020 and 900 million population falling in the age group of 15-60 years by 2025. People have enthusiastically started using technology to do banking transactions and benefit other services because they want more suitability at the cost of giving extra price.

2. Unpenetrated areas and government initiatives

Around 50% of the non-banked population is directed and developing towards the goal of financial presence. Due to some government initiatives, banks have incredible opportunities and advantages in implementing digital infrastructure. With Rs. 500 billion being targeted to be transmitted directly under DBT (Direct Benefit Transfer), around 160 million accounts have been opened under PMJDY (Pradhan Mantri Jan Dhan Yojna).

3. Leveraging increased smartphone usage and mobile penetration

Mobile phones are likely to lead the digital growth in India, because the youth of India prefer to use smart phones rather than stand in long queues to avail banking services. Mobile perception of around 90% is likely to drive financial insertion. The existing and predictable widespread reach of smart phones in the country provides a disruptive and low-cost medium, to extend the reach of banking and payments services. Refer the graphs below:

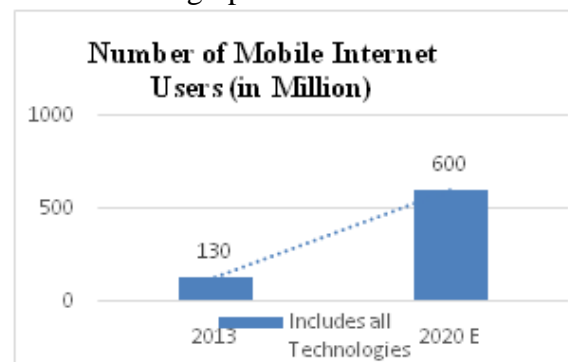


Figure3: Number of Mobile Internet Users

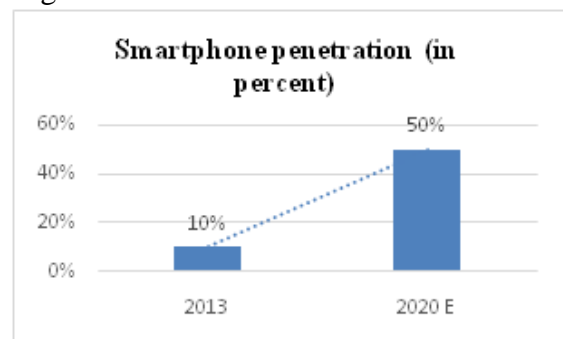


Figure4: Smartphone Penetration (in percent)

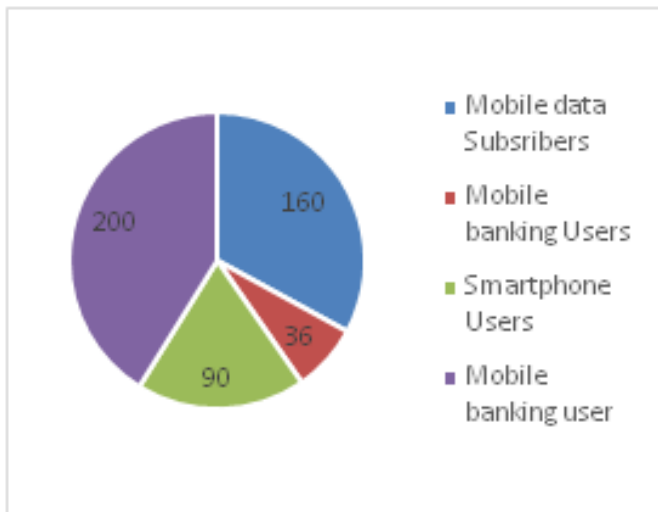


Figure5: India's Mobile Banking Opportunity

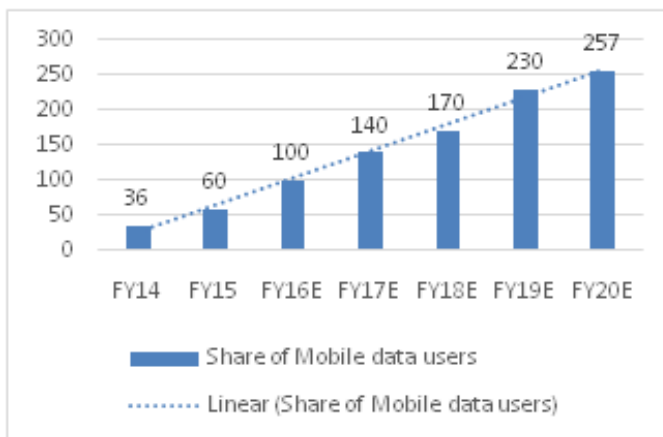


Figure6: Mobile banking user forecasts

Some Challenges:

- As per the report of FICCI, BCG, and IBA; 17% of the users were unaware about bank's digital offerings, 35% were aware but were not using, 7% were unhappy user and 42% were fulfilled users. The challenge here is to convert alertness into practice.
- MSMEs 70% and shopkeeper transaction's 90% were done through cash & cheque, only 8% MSMEs collect orders online, and only 4% agree payments online. This is completely improper in a digital world and thus becomes a challenge.
- 24% do not know how to use Mobile banking apps, 16% don't know about bank's app and 12% of them have fear of hacking.

Despite the huge possible and well-established promise of digital financial services, there is a need for the users to adopt a general approach on -going digital and combining business strategy with all the

elements of their operating ecosystem to create a significant customer experience.

Indigenous Banking:

The exact date of presence of indigenous bank is not exactly known. But, it is sure that the old banking system has been functioning for centuries. Some people suggests the presence of indigenous banks to the Vedic times of 2000-1400 BC. It has excellently fulfilled the needs of the country in the past.

However, with the approaching of the British, its failure started. Regardless of the fast growth of modern commercial banks, however, the indigenous banks continue to hold a noticeable position in the Indian money market even in the present times. It includes seths, shroffs, chettis, mahajans, etc. The indigenous bankers give money; act as money changers and finance internal trade of India by means of hundis or internal bills of exchange.

The main defects of indigenous banking are:

1. They are disorganized and do not have any communication with other sections of the banking world.
2. They associate banking with trading and commission business and thus have presented trade risks into their banking business.
3. They do not differentiate between short term and long term finance and between the purposes of finance.
4. They do not give receipts in most cases and they charge out of proportion interest in regard with other banking institutions in the country.

SUGGESTIONS FOR IMPROVEMENTS OF INDIGENOUS BANKING ARE:

1. The banking practices need to be upgraded.
2. These banks should be connected with commercial banks on the basis of certain understanding in the respect of interest charged from the borrowers, the confirmation of the same by the commercial banks and the passing of the discounts to the priority sectors etc.
3. These banks should be stimulated to become corporate bodies rather than continuing as family based enterprises.

IV. STRUCTURE OF INDIAN BANKING SYSTEM

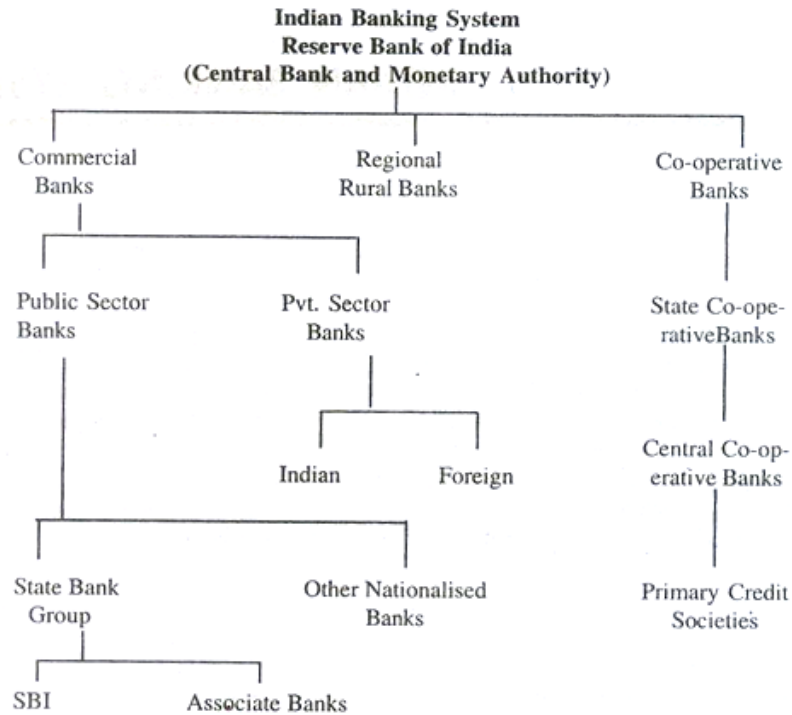


Figure7: Structure of Indian Banking System

RESERVE BANK OF INDIA (RBI):

The country had no central bank earlier to the establishment of the RBI. The RBI is the supreme regulatory and banking authority in the country and controls the banking system in India. It is called the Reserve Bank' as it keeps the reserves of all commercial banks.

COMMERCIAL BANKS:

Commercial banks organize savings of general public and make them accessible to large and small industrial and trading units mainly for working capital requirements. Commercial banks in India are private sector with a few foreign banks and largely Indian-public sector and. The public sector banks account for more than 92 percent of the entire banking business in India—occupying a leading position in the commercial banking. The State Bank of India and its 7 associate banks along with another 19 banks are the public sector banks.

SCHEDULED AND NON-SCHEDULED BANKS:

The scheduled banks are preserved in the second schedule of the RBI Act, 1934. These banks have a paid-up capital and reserves of a combined value of not less than Rs. 5lakhs, they have to please the RBI that their affairs are carried out in the interest of their depositors. All regional rural banks, commercial banks (Indian and foreign), and state cooperative

banks are scheduled banks. Non- scheduled banks are not involved in the second schedule of the RBI Act, 1934. At present there are merely three such banks in the country.

REGIONAL RURAL BANKS:

The Regional Rural Banks (RRBs) the newest form of banks, came into presence in the middle of 1970s (these are sponsored by individual nationalized commercial banks) with the objective of developing rural economy by providing credit and deposit facilities for agriculture and other productive activities of all kinds in rural areas. The importance is on providing such facilities to small and marginal farmers, rural artisan's, agricultural laborers, and other small entrepreneurs in rural areas.

COOPERATIVE BANKS:

Cooperative banks are organized under the provisions of the Cooperative Credit Societies Act of the states. The major recipient of the Cooperative Banking is the agricultural sector in particular and the rural sector in general. Long-term agriculture credit is provided by the Land Development Banks. The funds of the RBI meant for the agriculture sector actually pass through CCBs and SCBs. The cooperative credit movement has now spread to urban areas also and there are many urban cooperative banks coming under SCBs. The cooperative credit institutions operating in the country

are mainly of two classes: agricultural and non-agricultural. There are two separate cooperative agencies for the provision of agricultural credit: one

for short and medium-term credit, and the other for long-term credit.

V. Banking now and then

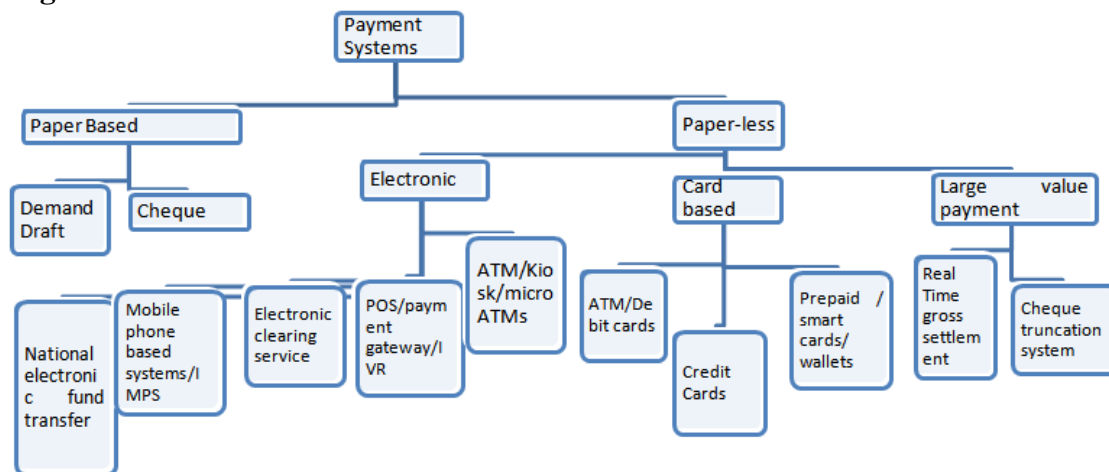


Figure8: Details of Payment System

Expense of digital banking

According to the RBI Report in 2016-17 there are 2,22,481 Automated Teller Machines (ATMs) and 25,29,141 Point of Sale devices (POS). Implementation of electronic payment system such as ECS (Electronic Clearing Service), NEFT (National Electronic Fund Transfer), RTGS (Real Time Gross Settlement), Mobile banking system, Debit cards, Prepaid cards, Cheque Truncation System, Credit Cards, have all gained wide recognition in Indian banks. These are all notable innovations in the digital revolution in the banking sector. Online banking has changed the face of banking and brought about a notable change in the banking operations.

National Electronic Funds Transfer (NEFT) is the most frequently used electronic payment method for transferring money from any bank branch to another bank in India. It operates in half hourly batches. Real Time Gross Settlement (RTGS) is largely used for high-value transactions which are centered on 'real

time'. The smallest amount to be remitted through RTGS is Rs. Two Lakhs. There is no upper limit. Immediate Payment Service (IMPS) is an immediate electronic funds transfer facility presented by National Payments Corporation of India (NPCI) which is available 24 x 7.

The usage of Prepaid payment instruments (PPIs) for purchase of goods & services and funds transfers has improved greatly in recent years. The value of transactions through PPI Cards (which include gift cards, foreign travel cards, mobile prepaid instruments, & corporate cards) & mobile wallets have jumped drastically from Rs.108 billion and Rs. 85 billion respectively in 2014-15 to Rs. 279 billion and Rs. 535 billion respectively in 2016-17

Table below shows Increase in volume related to RTGS, RECs, Debit card, Credit cards, prepaid payment instruments and Mobile banking:

Volume (Million)					
Year	RTGS	Retail Electronic Clearing (ECS, NEFT, IMPS)	Cards (Debit, Credit)	Prepaid Payment (m-Wallets, PPI Cards, Paper Vouchers)	Mobile Banking
2015-16	98.4	3141.5	10038.7	748.0	389.5
2014-15	92.8	1687.4	8424.0	314.5	171.9
2013-14	81.1	1108.3	7219.1	133.6	94.7
2012-13	68.5	694.1	6174.5	66.9	53.3
2011-12	55.1	512.4	5731.6	30.6	25.6

Table 1: Increase in volume related to RTGS, RECs, Debit card, Credit cards, prepaid payment instruments and Mobile banking

VI. LIMITATIONS

- **Security Risks** - External threats such as hacking, spoofing and sniffing expose banks to security risks. Banks are also exposed to internal risks especially frauds by employees in collusion with customers / employees.
- **Financial Knowledge / Customer Awareness** - Lack of knowledge amongst people to use e-banking facilities is the major limitation in India.
- **Fear factor** - One of the biggest obstacle in online banking is inclination to conventional banking method by older generation and mostly people from the rural areas. The fright of losing money in the online transaction is a wall to usage of e-banking.
- **Training** - Lack of suitable knowledge and skills is a major constraining for employees to deal with the innovative and changing technologies in banks. Training at all levels on the changing trends in IT is the requirement of the day.
- The high speed internet connectivity at rural places in India is big challenge. Experience shows that we have failed in providing 24x7 internet connectivity in rural and remote places.

VII. CONCLUSION

The mobile and wireless market has been one of the fastest growing markets in the world. The arrival of technology and the escalating use of mobile and smart

phone devices, has given the banking industry a new platform. Connecting a customer anytime and anywhere to their money and needs is a must have service that has become an unstoppable necessity. This worldwide communication is leading a new generation of strong banking relationships. The banking world can achieve superior interactions with their public base if they accommodate all their customer needs. They have a unique challenge to keep their customer alliances and keeping up with the new technologies, and competitive strategies that other banks also have to offer the public. Conveniences of services plus outside locations like ATMS are crucial to every banks success. Meeting all challenges including safety and security are perfect examples of good banking strategies. In order for the financial institutions to effectively grow they must embrace the new technologies and customize them to suit their economic success and the public's success.

VIII. References:-

1. http://ficci.in/sector/3/Add_docs/Financial-Foresights-April-2017.pdf
2. www.shodhganga.com
3. <https://www.avoka.com/blog/top-millennial-banking-trends>
4. <https://home.kpmg.com/in/en/home/insights/2015/08/financialsectorpov.html>

