

# India's Banking Technology Initiatives and their impact on Profitability

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**Abstract - The banking sector is a genuine financial service industry that is responsible for an economy's economic progress. Customer satisfaction is critical for maintaining current customers and acquiring new consumers to expand the company's operations. Day by day, a fierce rivalry is expanding across the corporate sector. Customer happiness is critical to a company's long-term performance and the study which mainly discussed about overview of the Indian banking industry, History of banking in India, General banking scenario in India, Types of banks, Evolution of banking industry, It in banking.**

**Keyword - bank, financial**

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## 1. INTRODUCTION

Banking systems throughout the globe have seen substantial changes as a result of factors like as deregulation, technology advancements, and globalization. Increased competitive pressure has emerged as a consequence of these changes. As a result, banks have been developing new products, finding new sources of revenue, expanding into non-traditional operations, and reducing capital expenditures. All of these changes have presented banks with a number of regulatory and supervisory issues. Customers are becoming more knowledgeable as a result of increased competition and technological breakthroughs, and their expectations are increasing at a breakneck pace. To maintain even current clients, items must be updated on a regular basis, bearing in mind what is going on in the world. The challenge is exacerbated by globalization, which requires the organization to stay up with global trends. The twenty-first century will be remembered as the period of paying close attention to client demands and increasing profitability via increased customer retention. The goal of every company is to attract and retain customers. The success or failure of a company is determined on the kind of client relationship it maintains. The client is the one solitary component that stands out as a factor of success in today's environment of competition, expanding consumerism, and information explosion. After all, the client is the lifeblood of a company. While establishing the reason for the existence of the company, "With regard to the definition of company purpose and mission, there is only one such emphasis, one starting point, and that is the customer," Peter Drucker remarked. A firm is defined by the requirements and demands of its consumers, not by the company name or of Articles of Incorporation. To meet his demands, the consumer

purchases a product or service. The objective and purpose of company is to serve the consumer.

An important role is played by the Indian banking system in the economy. A well-functioning financial system is essential for a thriving economy. India's financial sector has seen significant technological improvement and deregulation over the last several decades resulting in a wide range of innovative new banking products as well as most efficient and effective distribution routes for these goods. The banking industry benefits greatly from the advancements made possible via the use of information technology. Agricultural, small- and large-scale industry consumers are all benefiting from new services provided by banks. As a result, the banking sector is now more fiercely competitive and more powerful than ever. The Indian banking sector has embraced international prudential requirements with more openness and disclosures as a result of the banking industry's growth. Corporate governance and accounting standards are being adopted by Indian banks, as well as risk management. The penetration, productivity, and efficiency of banking operations have all grown as a result of the banking sector's technological advancements. Some of the technologies in which Indian banks have invested include net banking, mobile banking, internet banking, ATMs, smart cards, credit cards, debit cards, and electronic payment systems. Banks benefit from these distribution channels because they enable them to contact customers in an efficient and cost-effective way. Banking in India has become more efficient because to technology improvements that benefit both bankers and customers. All of these technological breakthroughs and their appropriate

use in the banking business will support growth and development.

## 1.1 Overview of the Indian Banking Industry

Banking institutions in India are categorized as private and specialized banking organizations. All inconsistencies and weaknesses are regulated and monitored by central bank, known as Reserve bank of India, since nationalization of banks in 1969. Public sector banks have made tremendous improvement since the nationalization of banks in 1969. Slowly moving public sector banks have had to take a big jump forward because of the requirement to concentrate on a high level of customer service. Rethinking current portfolio offerings has been encouraged by product and service introductions made available to all levels of banking and financial market networks. Indian banks have been largely insulated from the Asian currency crisis as a result of conservative banking procedures. Indian banks are now valued more than those in other Asian nations (e.g. Hong Kong, Singapore, the Philippines, etc.), which are plagued by massive NPAs and defaults. An efficient branch network and an emphasis on high-return niches make co-operative banks capable of adhering to this strategy. Banking in India has finally begun to participate in India's competitive dynamics, as well as to meet the numerous difficulties of globalization. IT-based banks are seen as "futuristic" and "forward-thinking" since they are able to accommodate the demands of a wide range of customers. Private Banks are on the rise, and the Internet is playing an increasingly important role in how they do business. As with every previous marketing medium, the Internet has evolved into a new and difficult frontier for marketing. It makes traditional use of the physical world conceivable.

There was a time when Indian banking was a lethargic operation, but it has now become a highly energetic and proactive industry. The liberalization and economic changes that have allowed banks to open up new business prospects rather of relying on traditional sources of income have played a major role in this transition (i.e. borrowing and lending). Nearly half of all deposits and nearly all of all loans are held by only 30 different Indian banks. India's nationalized banks (state-owned banks) are still the primary lenders to the economy because of their sheer size and widespread networks that assure high deposit mobilization. It is the Indian Reserve Bank's job to keep an eye on any inconsistencies or omissions in the system. The Indian financial sector's primary watchdog is the Reserve Bank of India. The Indian financial scene is dominated by the country's nationalized banks.

## 1.2 History of Banking In India

### 1. Origin

Banks in India were first established in the late 18th century. Both the Bank of Hindustan and the General Bank of India were established by the British East India Company in the year 1770 and 1786, respectively. The State Bank of India, which sprang from the Bank of Calcutta in June 1806 and was almost immediately, renamed the Bank of Bengal, is India's biggest and oldest a bank that has managed to survive, With the help of the British East India Company, the Bank of Bombay and the Bank of Madras were both created as presidential banks. After India gained independence in 1955, the Imperial Bank of India amalgamated with the State Bank of India, which was established in 1921. Until the Reserve Bank of India was established in 1935, the presidential banks and its successors served as India's de facto central banks for many years.

India's government nationalized all major banks it did not already possess in 1969. Competitive and permitted to function as commercial banks are administered by the Public Sector Undertaking (PSU), Banks in India are typically relatively well-established in terms of their product selection, yet this remains a problem for the impoverished in rural regions. State Bank of India's branch expansion and microfinance programmes are two government efforts aimed at addressing this problem.

## 2. Colonial Period

A partnership and subsequently a private limited company were the two forms the Union Bank of Calcutta used when it was initially established in 1829 by merchants under British rule. Owners of the previous Commercial Bank and the Calcutta Bank came together to build the Union Bank as a replacement for both institutions, The Union Bank was established in 1845, but it went out of business in 1848 due to its inability to pay its dividends and the need to borrow money from depositors. The oldest stock bank in India is the Allahabad Bank, which was established in 1865 and is still in operation today. The Bank of Upper India, which was created in 1863 and lasted until 1913, is the recipient of this honour. A portion of its assets and liabilities were transferred to the Alliance Bank of Shimla when it went under. In the 1860s, a number of foreign banks, particularly in Calcutta, sprang up. With outlets in Mumbai and Bombay, as well as in Chennai and Pondicherry, the Comptoir d' Escompte de Paris quickly expanded throughout the subcontinent. HSBC was established in Bengal in 1869. As a result of commerce with the British Empire, Calcutta became India's busiest commercial port, as well as a major financial hub. Oudh Commercial Bank, which was established in Faizabad in 1881, was the first Indian stock bank. The Punjab National Bank, which was formed in Lahore in 1895, is one of the major banks in India today. The Indian economy had a period of relative stability around the turn of the century. Indian rebellion occurred almost five decades ago; since then there has been significant progress in social

and industrial infrastructure as well as other areas. Indians have formed a number of local banks that serviced distinct ethnic and religious groups.

### 3. Post-Independence

- **Central Bank: Reserve Bank of India (RBI):**

The Reserve Bank of India Act of 1934 laid the groundwork for the RBI's establishment in 1935. The Reserve Bank of India's primary role is to safeguard the stability of the Indian monetary and credit system by regulating the issuing of banknotes and the keeping of reserves. There has been government control of the RBI since it was nationalized in 1949. It is the Central Bank's responsibility to supervise and regulate the commercial banking industry and other financial institutions including bank-finance firms, via the Board of Financial Supervision, a body of the RBI Governing Board. Banknote and coin production and distribution, foreign currency management, and financial transactions with the government and banks all fall under the purview of the Reserve Bank of India (RBI).

- **Banking Industry Association: Indian Banking Association (IBA):**

The interests of the Indian commercial banking sector are represented by the IBA, founded in 1946. It has 139 full members and more than 98 associate members. Its members include public sector banks, private sector banks, foreign banks with branches in India and municipal cooperative banks.

#### 1.3 General Banking Scenario In India

The advancement in the Indian banking system is classified into 3 distinct phases:

1. The pre-independence phase i.e. before 1947
2. Second phase from 1947 to 1991
3. Third phase 1991 and beyond

Most banks were tiny and had a high default rate prior to independence. As a consequence of poor public trust in these institutions, deposits were very slowly mobilized. A large part of the population's livelihood was dependent on unregulated industries. Second-phase features include the nationalization of financial institutions. In the context of economic policy, bank nationalization has emerged as a useful tool for fostering expansion and sustainability in the financial sector.

#### 1. Nationalizations in the 1969

Many of India's private banks have continued to function despite the Reserve Bank of India restrictions, and prohibitions. The exception is the State Bank of India (SBI). Banking in India has been a vital part of the country's economic growth in the 1960s. At the same time, the banking industry had become a major

employer, and there had been a discussion about nationalizing it. Former Indian Prime Minister Indira Gandhi announced the government's plan to nationalize Indian banks at the All India Congress Meeting's annual convention in a paper titled "Stray Thoughts on Bank Nationalizations."

- **Impact of Nationalization:**

1. Improved efficiency in the Banking system – since the public's confidence got boosted.
2. Sectors such as Agriculture, small and medium industries started getting funds which led to economic growth.
3. Increased penetration of Bank branches in the rural areas.

#### 2. Liberalization

A limited number of private banks were licensed by the former government as part of a liberalization agenda. Banks like ICICI Bank, HDFC Bank and Global Trust Bank (the first bank of this new generation to be created) are regarded as the technologically savvy banks of the new generation because of their ability to adapt to new technologies. The quick rise of the Indian economy and the revitalization of the banking sector in India, which saw substantial contributions from all three banking sectors, namely state-owned banks, private banks, and foreign banks, helped the banking sector in India to expand rapidly. With the planned relaxation of FDI restrictions, which would allow all foreign investors to be awarded voting rights in banks that exceed the present 10% limit, the next stage of the Indian banking system was developed. With certain limitations, it has increased to 74%. The banking industry in India has been thrown into a loop as a result of the new guidelines. The 4 - 6 - 4 approach was used by bankers up to this point (borrow at 4 %; borrow 6 %; go with 4) for conventional banks, the new wave brought a fresh viewpoint and cutting-edge technology. India's retail industry boomed as a result of this entire People pushed for more from their banks, and they received more in return.

#### 1.4 Types of Banks

- **Scheduled Banks**

"Scheduled banks" in India refer to banks that are included in the Second Schedule of the Reserve Bank of India Act, 1934, which was passed in 1934. The RBI only included banks on this list that satisfy the requirements of section 42 (6) (a) of the Act. As of June 30, 1999, India's 300 scheduled banks had a total network of 64,918 locations. Scheduled commercial banks in India include the State Bank of India and its affiliates (7), nationalized banks (19),

foreign banks (45), private sector banks (32), co-operative banks, and rural banks.

As defined under Section 3 of the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 (Act No. 5) and Section 3 of the Banking Companies (Acquisition and Transfer of Undertakings), 1980 (Act No. 40), all "scheduled banks in India" governed by these statutes were established.

- **Commercial Banks**

It is a financial institution and middleman known as a commercial bank (also known as a business bank). Time deposits are accepted by this bank, which loans money, offers transactional accounts, savings, and money market accounts. There are a variety of roles that commercial banks play in the financial sector. Agriculture, industry, commerce, and communication all benefit from this financial assistance. Consequently, their role in addressing economic and social demands is critical. According to the changing times, banks are adapting their operations to better meet the needs of their customers.

- **Cooperative Banks**

Banks that concentrate on retail and business banking are among the many varieties of cooperative banks. Customers may deposit money in cooperative banks across the world and borrow money from them. Cooperative banking includes credit unions, mutual savings banks, building societies, and cooperatives, as well as mutual organisations (such as cooperative federations) that provide commercial banking services to cooperative firms. In the world of co-operative banking, there are two primary types:

- Urban Co-Operative Banks
- State Co-Operative Banks.
- Urban Co-operative Banks

Urban Co-operative Banks are main cooperative banks based in urban and semi-urban regions, however the word is not officially defined. They could only lend money for non-agricultural reasons up until 1996. Today, this difference is no longer applicable. In the past, these banks had a strong presence in the areas they served. Most of the loans they gave out went to small businesses and individuals. In the previous several years, they've seen a considerable growth in their company.

- **State Co-Operative Banks**

A state co-operative bank is a bank that was established by the legislature of the state where it is headquartered to improve the state's ability to borrow and lend money to its citizens.

- **Foreign Banks**

A Bank based in foreign country is known as foreign bank. But if the majority holding of public listed bank is with Foreign Institutional Investors (FIIs), then also it can be termed as Foreign Bank.

- **Regional Rural Banks**

The Regional Rural Banks of India were formed by the Indian government on October 2, 1975. The first five RRBs were created on October 2, 1975, and were sponsored by Syndicate Bank, State Bank of India, Punjab National Bank, United Commercial Bank, and United Bank of India. 50 percent of federal funds, 15 percent of state funds, and 35 percent of scheduled bank funds go toward supporting agriculture in India's rural regions. In India, the country's growth was aided by the expansion of regional rural banks.

- **Public Sector Banks**

The government owns a majority of the shares in public sector banks (PSBs) (i.e., more than 50 percent). The stock of these institutions may be found on the open market. More than twenty-six public sector banks (PSB) operate in India. Saurashtra State Bank and Indore State Bank were absorbed by SBI.

The objectives behind nationalization where:

- To end the monopoly of a small number of business families over banking institutions
- For the sake of preventing the concentration of wealth and economic power,
- To organize the people from all throughout the nation to save money,
- To meet the demands of the most important areas of the economy

In 1955, the Imperial Bank of India was nationalized by the Central Government, which joined the banking industry. The Reserve Bank of India took a 60% interest in the new bank and renamed it the State Bank of India. When the new bank was nationalized on July 19, 1960, the seven other state banks became subsidiaries of the new bank. Further large banks were nationalized by the Indian government in 1969, led by Prime Minister Indira Gandhi, who took over the reins of the country. In April 1980, the second stage of nationalization was completed. Six banks were nationalized by the government.

- **Private Sector Banks**

Those banks in which the majority of shareholders are private rather than government-owned are known as "private-sector banks." With regards to banking and corporate growth, these are India's most important players. Over the last two centuries,

the growth of private-sector banks has resulted in a wide range of modern technologies, monetary instruments, and ways for dealing with the complications. Professionally managed, they have a well-developed organisational structure. As a result, they have developed at a rapid pace during the last several years.

- **Old Private Sector Banks**

These are the former private-sector banks that were not nationalized during the period of bank nationalization that occurred between 1969 and 1980. Because of their limited size and localized concentration, they were not nationalized.

- **New Private Sector Banks**

"New private-sector banks" refer to the banks that were established following the adoption of economic reforms and financial sector reforms in 1991. It was in 1993 that the Banking Regulation Act was changed, allowing private sector banks to enter the Indian banking system. Many new private-sector banks were required to meet specific standards before they could open their doors to customers:

- The bank's net worth should be at least Rs. 100 crores.
- A minimum of 25% of the paid-up capital should be held by the promoters.
- Within three years of the bank's activities beginning, the public should be able to purchase shares in the bank.

### 1.5 Evolution Of Banking Industry

Banking in India has its origins in the last decades of the 18th century. The largest and oldest still existing bank is the State Bank of India (S.B.I.). The Indian banking sector is largely divided into line banks and non-scheduled banks. The scheduled banks are those listed under the 2nd Schedule of the Reserve Bank of India Act, 1934. The planned banks are further subdivided into: nationalized banks, the State Bank of India and its affiliates, Regional Rural Banks (RRBs), foreign banks and other Indian private banks. Commercial banks are both scheduled and non-scheduled commercial banks regulated under the 1949 Banking Act.

Commercial banks in India are divided into five different groups according to ownership and/or type of business:

- State Bank of India and its affiliates
- Nationalized banks
- Private sector banks

- Foreign banks
- Regional rural banks

### 1 Growth drivers of the Indian Banking Industry

- The Indian economy's rapid expansion
- A rise in the average income per person
- By 2020, it is predicted that mobile banking will surpass ATMs in terms of banking channels.
- Financial Empowerment Initiative (FEI)
- Customer Service in the Banking Industry

### 2 Trends in Banking Industry

- improved risk-management procedures
- The creation of a variety of income streams
- Innovation in Technology
- With the rise of online and mobile banking,
- Next-generation technology in banks is being driven by CRM and data warehousing, respectively.
- The rural branch network of banks is being bolstered to take advantage of new commercial prospects.

### 1.6 It In Banking

The Financial sector has IT as its major medium for transformation encompassing e-banking, e-broking, e-insurance, e-governance, e-money, e-finance, e-exchange, and e-supervision. Improvements in IT have the promise to reduce asymmetric

Information, as investors or customers can monitor the processing of financial corporations. Within financial sector, banking sector is one field where the role of technologies is very significant and vibrant. Although there is no panacea for banks to stay competitive, technology has become the lifeline of excellence and efficiency for banking institutions. Today, the question is not of who is providing e-services but who is not. Technology has become an enabler of global branding of financial services through the removal of geographic and cost barriers to global distribution and through the stimulation of a global convergence in benefits sought by banking consumers.

e-Banking is considered as a system that provides an electronic linkage enabling banks to offer their customers access to their accounts and the bank itself in order to prepare, manage, and control

financial transactions through transferring information. Alternatively, e-services are defined as services delivered via Information and Communication Technology where the customer interacts solely with an appropriate user interface (e.g., Automated Teller Machine or Web site) in order to retrieve desired benefits. Electronic Banking has the potential and to some extent providing services to the customers wherever, whenever, and however they want, loosening time-and-space restrictions or increasing just in time nature of banking services. There are basically two forms of electronic models that the banks are adopting: e- banks and e- branches. E - bank is defined as a banking institution offering banking services exclusively over electronic channels (internet, mobiles, or ATMs) without any branch network.

### 1.7 Technological Changes in the Indian Banking Industry over time

Dr. Rangarajan, Saraf, Shere, and Vasudevan (1999) chaired notable committees on computerization in banks that led to a series of technical, systemic, and regulatory reforms in the Indian banking sector, which in turn sparked and organized the industry's transformation. The Narasimham Committees (1991, 1998) sparked a reformatory era that heightened banks' knowledge of the role and value of technology in banking by igniting a competitive and inventive business strategy frenzy. The following is a list of significant events in Indian banking as a result of the advent of IT:

- The major breakthrough started with use of Advanced Ledger Posting Machines (ALPM) in 1980s.
- The Indian Banks' Association and the All India Bank Employees' Association came to an agreement in September 1983 on the installation of electric/electronic machines (other than computers), microprocessors, and mainframe computers to support specific functional areas in branches, zonal offices, and corporate headquarters.
- In late 1980s banks Total Bank Automation (TBA) which means total automation of a particular branch with its own database, was introduced at both the front-end and back-end operations within the same branch.
- Mechanized cheque processing systems have been established which used the Magnetic Ink Character Recognition (MICR) technology.
- HSBC set up the first ATM machine in India in 1987.

## 2. CONCLUSION

Economic development is fueled by technical advancements. These adjustments are made to the

manufacturing process's input-output relationships. Simpler manufacturing methods give way to more advanced and complex ones as the economy progresses up the development ladder. It's been recently debated in economics what function ICT plays and how it affects productivity at the micro and macro levels. ICT is described as the technology of managing information by electronic means, which includes access, storage, processing, transmission, and delivery of information. To summaries, technology is not a cure-all, but rather a tool for improving efficiency, IT in banks is promising as well as lucrative in terms of operational and strategic benefits it offers. IT provides benefits to the banking institutions in terms of reduced operational cost, better customer service and development of sophisticated product offerings as it facilitates better asset – liability management and advanced market research. In the Indian banking context, almost all banks have incorporated IT in their strategies and operations but at different levels depending upon the driving forces and obstacles for its successful implementation.

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