



A STUDY ON INNOVATION BANKING SECTOR IN INDIA

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Abstract:

In an economy like India, where the population has reached 1200 million and 500 million of these people deal with banks on a daily basis, there was an urgent need to ensure financial inclusion and increased transparency in the banking sector, which was met through the adoption of technology and innovation in bank operations. To facilitate this innovation, the Indian banking sector is undergoing a significant transformation across all of its verticals. This transformation not only results in a dramatic shift in the bank's approach to its customers, but also in a vigorous information and technological transformation of banking products. As far as the evolution of innovation in the Indian banking sector is concerned, it can be traced back to the 1990s with the advent of the LPG policy in India, which completely altered the way banking was conducted. The turn of the twenty-first century saw a tremendous expansion of India's banking system. With the establishment of private and international banks, innovation in the banking sector gained a push, resulting in the activation of technological sophistication in every banking transaction.

Technology innovation has resulted in a sea change in the way banks operate in India, both internally and externally, by enabling banks to provide superior customer service. Following the use of technology by the Indian banking sector, India emerged as one of the world's youngest but most powerful countries, attracting FDI from all corners of the globe. Additionally, innovation in banking results in Business Process Re-Engineering, which addresses issues such as how to deliver the best products and services to customers, how to design an appropriate organizational model to fully capture the benefits of technology, what steps can be taken to change the business process, and how to use technology to achieve economies of scale. The primary benefits of using technology resolutions in the banking industry include faster, more accurate and efficient

data and information processing, as well as the acceleration of the decision-making process. One of the most recent examples of this IT innovation in banking is ATMs. As a result of these IT innovations, consumers are no longer required to visit branches for routine banking transactions such as cash deposits, withdrawals, cheque collection, and balance inquiry. Additionally, this has resulted in a nearly tenfold reduction in branch banking transaction expenses. The relevance of information technology does not end here. It was critical in consolidating banking networks, as evidenced by the banks coming together.

to collaborate on ATM networks. Numerous developments have occurred in the Indian banking business, including ECS, RTGS, EFT, NEFT, ATM, retail banking, debit and credit cards, free advisory services, online banking, and mobile banking, among others.

Keywords:

Innovative Banking, Technological Changes, Indian Banking sector

INTRODUCTION

The phrase "innovation" refers to the process of creating something new. Banks no longer limited themselves to typical banking activities, but sought out new opportunities for growth and market penetration.

1. Banks and financial services organisations will be centred on the preferences of their customers: As you grow and begin to save money, you will have the immediate and personal option of delegating your money management to a variety of services or managing it yourself. You'll be able to create criteria that will automatically update your portfolio to reflect your preferences, such as investing exclusively in ecologically sustainable enterprises or the nation of your birth.
2. Banks of the future will be accessible via mobile devices. For instance, your phone will be constantly learning about investing opportunities and delivering them to you.
3. There will be robot counsellors who will intervene in real time to prevent you from making poor financial decisions. For instance, if you attempt to purchase an excessive number of shares in a company, an automatic Know Your Customer and Suitability Tool will block you. If you make an impulse purchase of, say, a jacket that you don't really need [the tool knows how many jackets you already own], it will calculate the cost in terms of future pension or schooling savings.
4. Highly sophisticated algorithms will continuously analyse the activity of a bank's data in order to discover external and internal security concerns.
5. Banks might become identity brokers, assessing and utilising the information they have on their clients and providing that information to consumers or other vendors in exchange for certain products and services, such as insurance and creditworthiness.
6. Banks will be supplanted by platforms that are almost totally run by algorithms and robots — they will

effectively become technology businesses that facilitate the exchange of data and analysis on customers, products, and markets.

7. Block chain technology will be widely used to distribute, verify, and record a diverse array of financial services, further decentralising the financial system. Certain dangers will be removed, while others will be added.

FINANCIAL INDUSTRY INNOVATION

Financial innovation is critical for banks to survive in today's banking climate. Financial innovation is universally considered as critical. Numerous prominent researchers, notably Miller (1986) and Merton (1992), have emphasized the financial sector's importance of products and services. Innovative ideas are present in a variety of businesses and in a variety of forms. One of the most visible examples of innovation is product creation, which banks utilize extensively nowadays. From the start of the financial transformation, innovations have been critical in reducing financial exclusion and enhancing the way banking services are delivered to individuals. Financial innovation is a term that is frequently used in the banking industry. These terms are used to refer to any alteration in the size, scope, or delivery of financial services. The freedom granted to the financial services industry increased competition in investment banking, which likely resulted in an increase in banks' ability to invent new products, improve processes, and execute more effective solutions to more complicated financial challenges. These financial innovations are the result of a variety of factors, including government legislation, tax policies, globalization, liberalization, privatization, and global integration. Financial innovation, in its simplest form, is the process by which all financial organizations operating in financial markets add value to their existing plain vanilla goods in order to best serve user needs. According to John Finnerty's renowned definition, "financial innovation" entails the design, development, and implementation of novel financial instruments and processes, as well as the creation of novel solutions to financial problems. Among the numerous innovations in the banking and financial sector are ECS, RTGS, EFT, NEFT, ATM, Retail Banking, Debit & Credit cards, free advisory services, utility bill payments, fund transfers, internet banking, telephone banking, mobile banking, insurance product sales, free cheque books, and travel cheques, among others. This also resulted in fierce competition among banks, with the result that the banking sector is attempting to reinvent the concept of the banking system as a whole. Banks are constantly on the lookout for new ways to attract and keep consumers, as well as gain a competitive edge over their competitors. Banks, like other businesses, are always inventing novel sales strategies and improved marketing tools in order to achieve supremacy. The primary driver of innovation in the banking business is the continually changing requirements and prospects of customers. No customer wants to waste time waiting in huge lineups or spending hours on financial transactions in this age of the internet and speed.

This shift in client attitudes acts as a spur for increased innovation in the banking sector, and as a result of this technological innovation, ATMs, mobile phones, and internet banking became available. With the advent of universal banking, banks goal of providing all banking products in one location became a reality. While banks are striving to build client relationships and move toward relationship banking, customers are increasingly seeking the ease of electronic banking. Information technology and communication networking systems have revolutionized the way banks and financial institutions operate throughout the world.

REVIEW OF THE LITERATURE

The following is a quick assessment of the literature on innovation in the Indian banking sector conducted by various researchers globally.

Merton (1992) coined a new word for banking sector improvements, namely "financial innovations," and highlighted important benefits of these developments, including lower cost of capital, reduced financial risks, improved financial intermediation, and improved client welfare. He also examined how innovation contributes to the primary role of the banking system, namely the facilitation of the allocation and consumption of economic resources in an unpredictable environment.

Avasthi and Sharma (2000-01) place a premium on technical advancements that have altered the face of banking. The researcher also discussed how technology has distorted the banking business, particularly when it comes to banks' delivery channels in the retail banking sector. He also discussed the numerous issues that the banking industry has in its early years.

B. Janki's (2002) research demonstrates how technology affects staff productivity. Additionally, the research demonstrates India's dire need for technology innovation, particularly in public sector banks, in order to boost operational efficiency and customer service. As a result, technology is used more in areas such as customer service, product development, and risk management. The study indicates that technological innovation is the sole means of achieving an economy's long-term development goals.

Arora (2003) focused on the consequences of bank reform in his research. Technology innovation plays a critical role in facilitating transactions in the banking sector, and its adoption has resulted in the development of new goods and services.

Rishi and Saxena (2004) also contributed to the field of technological innovation by conducting research. The study noted that technological advancements in the banking sector in developed countries have been

proved to boost the global banking industry's productivity. According to Merton and Bodie's 2005 research, financial innovation serves as a supportive instrument for assuring smooth execution and increases the system's overall efficiency by lowering costs and lowering risk. It is not inaccurate to assert that financial innovation has been a primary driver of the financial system's evolution toward better economic competence.

R.K. Mittal and S. Dhingra (2006) conducted a study on the influence of technology in the banking business. They analysed the investment scenario for Indian banks in technology, but this study also shed light on the various issues that existed in the banking sector prior to the introduction of the Information Technology Act, as well as on the various challenges faced by banks in India during a time when technology was scarce. K.C. Padhy's 2007 research sheds light on the impact of technological advancements on the banking system and also shows the Indian banking sector's future. Additionally, his research shed light on the basic competences that today's banks face and identified several elements that provide one bank a comparative advantage over another. In a nutshell, the study examines how the banking industry has embraced numerous innovative strategies in order to grow their business and attract and keep new consumers.

Hua G. (2009) research focuses on the recognition of online banking in China by performing an experiment to determine how users perceive online banking and if they feel at ease and secure when doing online financial transactions on a bank website.

B. Jalan (2010) centred his research on the overall IT evolution that has altered the banking business. Perhaps no other area has been as impacted by technological advancements as the banking and finance sector has. It possesses the critical factor necessary for contending with increased competition and the rapid proliferation of financial innovations.

OBJECTIVE OF THE STUDY

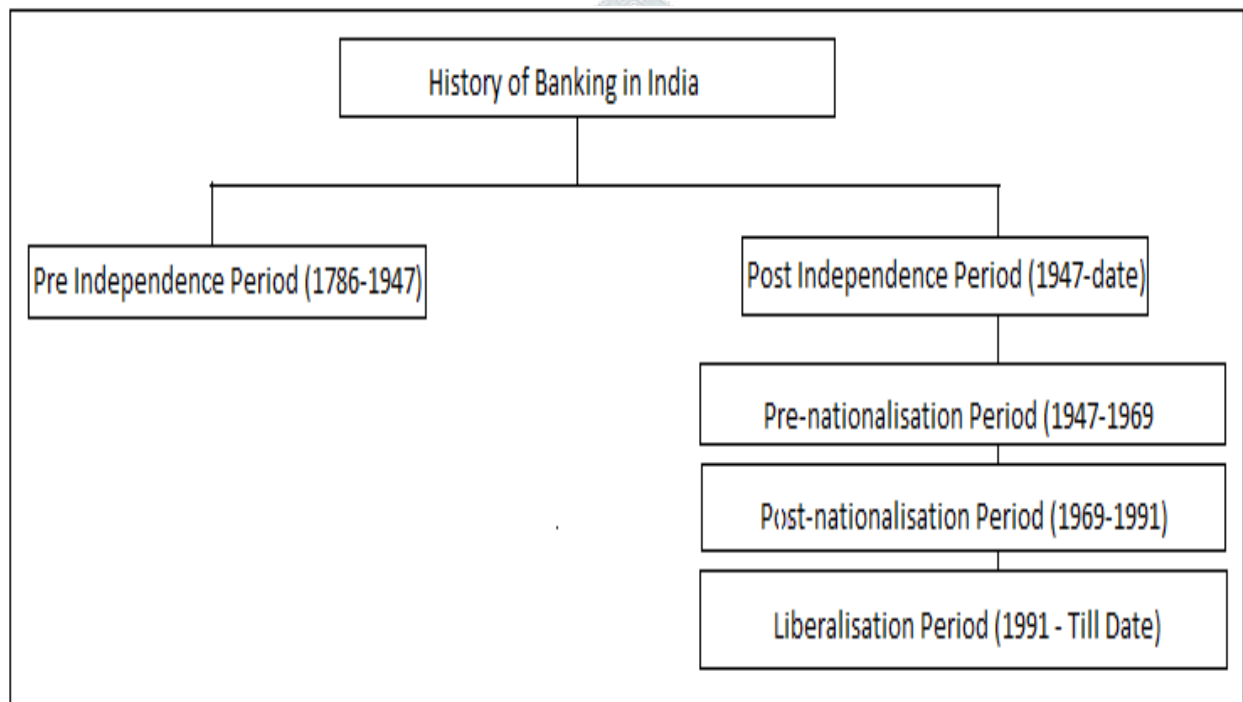
1. A brief history of the Indian banking system.
2. The study's objective is to highlight recent financial advances in India's banking sector.
3. To examine the difficulties confronting Indian banks in light of the changing environment.

RESEARCH METHODOLOGY

The study is being conducted in order to ascertain the current state of the Indian banking sector. The entire paper is based on secondary data sources, such as various websites and academic journals.

EVOLUTION OF BANKING IN INDIA

Given below is a pictorial representation of the evolution of the Indian banking system over the years:



Further below in this article, we shall discuss the different phases of Bank industry evolution.

Pre Independence Period (1786-1947)

The first bank of India was the “Bank of Hindustan”, established in 1770 and located in the then Indian capital, Calcutta. However, this bank failed to work and ceased operations in 1832.

During the Pre Independence period over 600 banks had been registered in the country, but only a few managed to survive.

Following the path of Bank of Hindustan, various other banks were established in India. They were:

- The General Bank of India (1786-1791)
- Oudh Commercial Bank (1881-1958)
- Bank of Bengal (1809)
- Bank of Bombay (1840)
- Bank of Madras (1843)

During the British rule in India, The East India Company had established three banks: Bank of Bengal, Bank of Bombay and Bank of Madras and called them the Presidential Banks. These three banks were later merged into one single bank in 1921, which was called the “Imperial Bank of India.”

The Imperial Bank of India was later nationalised in 1955 and was named The State Bank of India, which is currently the largest Public sector Bank.

Given below is a list of other banks which were established during the Pre-Independence period:

Pre-Independence Banks in India	
Bank Name	Year of Establishment
Allahabad Bank	1865
Bank of Baroda	1908
Punjab National Bank	1894
Bank of India	1906
Central Bank of India	1911
Canara Bank	1906

If we talk of the reasons as to why many major banks failed to survive during the pre-independence period, the following conclusions can be drawn:

- Indian account holders had become fraud-prone
- Lack of machines and technology
- Human errors & time-consuming
- Fewer facilities

- Lack of proper management skills

Following the Pre-Independence period was the post-independence period, which observed some significant changes in the banking industry scenario and has till date developed a lot.


Post-Independence Period (1947-1991)

At the time when India got independence, all the major banks of the country were led privately which was a cause of concern as the people belonging to rural areas were still dependent on money lenders for financial assistance.

With an aim to solve this problem, the then Government decided to nationalise the Banks. These banks were nationalised under the Banking Regulation Act, 1949. Whereas, the Reserve Bank of India was nationalised in 1949.

Following it was the formation of State Bank of India in 1955 and the other 14 banks were nationalised between the time duration of 1969 to 1991. These were the banks whose national deposits were more than 50 crores.

Given below is the list of these 14 Banks nationalised in 1969:

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1. Allahabad Bank
 2. Bank of India
 3. Bank of Baroda
 4. Bank of Maharashtra
 5. Central Bank of India
 6. Canara Bank
 7. Dena Bank
 8. Indian Overseas Bank
 9. Indian Bank
 10. Punjab National Bank
 11. Syndicate Bank
 12. Union Bank of India
 13. United Bank
 14. UCO Bank

In the year 1980, another 6 banks were nationalised, taking the number to 20 banks. These banks included:

1. Andhra Bank
2. Corporation Bank
3. New Bank of India

4. Oriental Bank of Comm.
5. Punjab & Sind Bank
6. Vijaya Bank

Apart from the above mentioned 20 banks, there were seven subsidiaries of SBI which were nationalised in 1959:

1. State Bank of Patiala
2. State Bank of Hyderabad
3. State Bank of Bikaner & Jaipur
4. State Bank of Mysore
5. State Bank of Travancore
6. State Bank of Saurashtra
7. State Bank of Indore

All these banks were later merged with the State Bank of India in 2017, except for the State Bank of Saurashtra, which merged in 2008 and State Bank of Indore, which merged in 2010.

Note: The Regional Rural Banks in India were established in the year 1975 for the development of rural areas in India. Candidates can get the list of RRBs in India at the linked article.

Impact of Nationalization

There were various reasons why the Government chose to nationalise the banks. Given below is the impact of Nationalising Banks in India:

- This led to an increase in funds and thereby increasing the economic condition of the country
- Increased efficiency
- Helped in boosting the rural and agricultural sector of the country
- It opened up a major employment opportunity for the people
- The Government used profit gained by Banks for the betterment of the people
- The competition decreased, which resulted in increased work efficiency

This post-Independence phase was the one that led to major developments in the banking sector of India and also in the evolution of the banking sector.

Once the banks were established in the country, regular monitoring and regulations need to be followed to continue the profits provided by the banking sector. The last phase or the on-going phase of the banking sector development plays a hugely significant role.

To provide stability and profitability to the Nationalised Public sector Banks, the Government decided to set up a committee under the leadership of Shri M Narasimham to manage the various reforms in the Indian banking industry.

The biggest development was the introduction of Private sector banks in India. RBI gave license to 10 Private sector banks to establish themselves in the country. These banks included:

1. Global Trust Bank
2. ICICI Bank
3. HDFC Bank
4. Axis Bank
5. Bank of Punjab
6. IndusInd Bank
7. Centurion Bank
8. IDBI Bank
9. Times Bank
10. Development Credit Bank

The other measures taken include:

- Setting up of branches of the various Foreign Banks in India
- No more nationalization of Banks could be done
- The committee announced that RBI and Government would treat both public and private sector banks equally
- Any Foreign Bank could start joint ventures with Indian Banks
- Payments banks were introduced with the development in the field of banking and technology
- Small Finance Banks were allowed to set their branches across India
- A major part of Indian banking moved online with internet banking and apps available for fund transfer

Thus, the history of banking in India shows that with time and the needs of people, major developments have been brought about in the banking sector with an aim to prosper it.

TYPES OF INNOVATIVE BANKING

The term "innovation" refers to anything novel or unheard of. The same is true for the banking area. Numerous departments within banks are undergoing or have recently undergone innovation. They are no longer constrained by time-honoured (traditional) practises. Thus, banks are turning to innovation to expand their business

opportunities and grab new markets. This term "innovative banking" is frequently used these days.

Banking Innovations

Banks have launched a variety of new banking products in recent years. These are the forms of innovative banking that banks are utilising these days:

Banking on the Go Mobile banking has exploded in popularity over the last few years. It fundamentally altered the way banking systems operate. Thus, it is a system that enables clients to conduct a variety of financial transactions using a smart phone.

These services include ATM locations, bill payment alerts, inter- or intra-bank transfers, and bill payments, among others. As a result, services are available to anybody.

Banking over the Internet

Internet coverage has improved dramatically during the last few years. Online banking, web banking, or virtual banking are all terms that refer to this service.

As a result, this banking service enables consumers to initiate and complete any financial transaction or service via the Internet. Banking services are generally offered through a local bank location.

This includes bill payments, money deposits, money borrowing, and other services all in one location. This service is provided through the usage of the Internet. In India, ICICI Bank was the first bank to offer Internet banking to its customers.

Banking, both retail and wholesale

As with other industries, banking has evolved into retail and wholesale banking and is also a component of innovative banking.

Retail banking refers to the banking sector in which banks conduct daily transactions with consumers.

As a result, this is done instead of conducting transactions with other banks or corporations. This category includes the following services:

- Personal loans
- Savings accounts
- Debit card

Retail banking is the polar opposite of wholesale banking. It refers to the transactions made with commercial and industrial enterprises.

Thus, wholesale banking includes trade houses, domestic enterprises, and multinational corporations. Thus, wholesale banking encompasses a variety of services, including the following:

- Value-added services
- Services dependent on funds
- Services unrelated to funds

- Banking over the Internet
- International and offshore banking

Multinational banking refers to financial institutions that operate in more than one country. These services are offered in multiple countries. As a result, these banks are frequently referred to as international banks.

In 1946, Indian bank became the first bank to offer its services outside of India. Bank of Baroda currently has the most international franchises in India.

While offshore banking occurs when banking activities are conducted in currencies other than the country in which the bank account is opened. However, the banking services offered by these banks remain unchanged.

Banking: Strict and Universal

Narrow banking entails concentrating the majority of deposits in risk-free assets such as government securities. In India, this is mostly in terms of performance in terms of reducing the size of NPAs.

While universal banking encompasses commercial, investment, insurance, and a variety of other financial operations. Thus, every product is offered in this practise.

PRODUCT & SERVICE TYPES

a. Comprehensive branch automation

The adoption of information technology in banks has resulted in a completely automated banking model, which has increased transaction accuracy and speed. Banking automation is primarily concerned with reducing human participation in the banking system in order to increase accuracy and reduce bias throughout the system.

b. Banking at any branch

Any Branch Banking (ABB) is another service provided by banks to their customers that enables them to manage their bank accounts from any of the bank's network branches. The branch where the customer maintains his account is referred to as the base branch, while the branch where he conducts his daily business is referred to as the remote branch. This banking system provides the following services: cash withdrawals and deposits, account statements, the ability to issue multi-city cheques, fund transfers, balance inquiries, the purchase of demand draughts and pay orders, and loan account payback.

c. DEMAT (Defence Electronics and Metallurgy) Service

DEMAT Accounts, or dematerialized accounts, are primarily used for investing in, purchasing, and selling stocks and other financial assets. Securities are maintained electronically in a DEMAT account, which eliminates the requirement for tangible paper certificates as evidence of an investment in shares or any other tool. The availability of DEMAT has elevated the selling and acquisition of securities to new heights by obviating the necessity for brokers at every stage. It provides a secure and convenient method of tracking stocks and investments over time without the inconvenience of dealing with physical documentation. It enables internet commerce.

d. Microfinance

Microfinance is the bank for low-income individuals who lack permanent access to money. It was created to enhance the lives of those who are too poor to be served by traditional banks. Microcredit or microfinance provides financial services to un-bankable individuals such as savings, small loans, and other modest amount insurance. In a nutshell, a micro bank is a bank for persons with limited financial resources.

e. Money made of plastic

Plastic money, alternatively referred to as polymer money, is a generic word that refers to all types of bank cards, including debit cards, credit cards, and smart cards. Additionally, it is one of the greatest alternatives to cash or currency because it is easy to transport and handle and serves as the most convenient method of payment for products and services. These cards were launched in the 1950s and have since become an indispensable method of payment, particularly during India's demonetization period. Additionally, they have successfully reduced the risk associated with handling large amounts of cash.

f. Cellular Banking

In the banking sector, IT innovation resulted in the most widely utilised service known as mobile banking. It is a service that practically every bank today provides to its customers that enables them to execute a variety of financial activities in remote places using only a mobile device such as a phone or tablet and bank-provided software, sometimes referred to as an app. This service is often available 24 hours a day. The various financial operations that a customer may conduct via mobile banking include obtaining account balances, retrieving a list of recent transactions, making electronic bill payments, and transferring monies between the customer's or another's accounts. Some even allow for the downloading of statements. From a bank's perspective, one of the primary benefits of mobile banking is that it decreases transaction costs by eliminating the need for consumers to visit a bank office for non-cash withdrawal and deposit transactions. In a nutshell, mobile banking is a type of banking that travels with you and enables you to manage your account from any location, at any time, and in any weather.

ELECTRONIC SYSTEMS

ATM

ATM stands for “Automatic teller machine” it is one of the most widely use electronic channel of banking sector. Its working is controlled by computer through this customers can make withdrawals, check their account balance and know they can even deposit their money into their account that to without going to bank and this become possible only through ATM. with the increase in demand of customer towards use of ATM now these are available within bank premises and even anywhere outside the bank premises. In order to meet customerdemand for ATM the banks has increased their dispersionfurther with the total number of ATMs and finally it has reached to 0.18 million in 2021.

ATM & Card Statistics for June 2021 shows that Total No. of ATM's are:

On-site: 115552

Off-site: 98214

RTGS

RTGS stand for Real-time gross settlement systems it an electronic method of fund transfer. In this funds transfer takes place from one bank to another on a "real time" and on "gross" basis. Know the question arises what is real rime and gross settlement. Here the words 'Real Time' mean the process of instructions that are executed at the time funds are received, rather than at some later time. On the other hand "Gross Settlement" refers to the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis) i.e. transaction is settled on one to one basis without bundling or netting with any other transaction

RTG is one of the most popular and fastest possible money transfers system which include the banking channel. The time taken for effecting funds transfer from one account to another is normally not more than 2 hours. The only disadvantage of this method is that if it is once processed, payments are final then they are irrevocable. RTGS is used for high-value transactions that require immediate clearing. In some countries the RTGS systems may be the only way to get same day cleared funds and so may be used when payments need to be settled on urgent base.

FINACLE

This system provides the holistic and integrated transformation approach, complete with solutions and services. Finacle solutions addresses the requirements of retail, corporate and universal banking worldwide like: Core banking solution, E- banking solution, Mobile banking solution Wealth management, CRM requirements, etc.

CONCLUSION

Following a series of technical innovations, the Indian banking sector emerged as one of the most robust in the world, not only in terms of capital, but also in terms of acquiring and retaining customers. The Indian banking system has developed to the point where it can compete globally with other banks in terms of productivity and service efficiency. The emphasis has shifted away from the product and onto the customer. Private Sector Banks of India are a critical factor in the development of the Indian banking industry since they operate as a catalyst for igniting the fire of competition in the country, resulting in great improvement in both public and private

sector banks. Indian banking has evolved into a market leader in Internet banking, mobile banking, phone banking, and ATMs as a result of innovation. Information technology is merely the tool that redefined and reengineered the banking system, giving it the face that the banking sector has today. The use of these IT reforms demonstrates unequivocally that the future of banking will be more sophisticated, and the standard of services to customers will continue to be improved through new product and process innovations. Thus, it is accurate to assert that innovation has resulted in the transformation of "traditional banking to convenience banking" and "mass banking to class banking," particularly in emerging economies such as India.

REFERENCES:

- Andrade, C “Banking products and services” in Indian institute of banking and Finance, Mumbai.
- Aruna R. Shet — Technological Innovations in Indian Banking Sector| International Journal of Scientific Engineering and Research (IJSER), ISSN (Online): 2347-3878
- Avasthi G P M (2000-01), “Information Technology in Banking: Challenges for Regulators”, Prajnan, Vol. XXIX, No. 4, pp. 3 – 17
- B.P.Gupta, V.K.Vashistha, H.R.Swami, Banking and Finance, Ramesh Book Depot, Jaipur-New Delhi (2008).
- Banking Law and Practice by P N Varshney, Sultan Chand & Sons, New Delhi
- Dadabhoy K. Bakhtiar (2013) “Barons of Banking” Random House.
- Various issues of Business Week, The Economist, Business Today, The Economic Times and Financial Express.
- Reddy, Y. V. 2005. "Banking Sector Reforms in India: An Overview." RBI Bulletin. June.
- Report on Trend and Progress of Banking in India 2014-15
- Sethi Jyotsna, Bhatia Nishwan (2012) “Elements of Banking and Insurance” New Delhi, PHI Learning Pvt. Ltd
- Shastri, R.V. (2003), “Recent Trends in Banking Industry: IT Emergence”, Analyst, (March), pp. 45-46.
- Shekhar K C, Shekhar Lekshmy (2013) “Banking: Theory and Practice” Noida, Vikas Publishing House Pvt. Ltd

Websites:

- www.rbi.org.in
- <http://www.techworld.com>
- <http://economictimes.indiatimes.com/industry/banking/finance/banking/icici-bank-introduces-software-robotics/articleshow/54258671.cms>
- <http://perspectives.icicibank.com>
- <https://www.cryptocoinsnews.com/cryptocurrency/www.livemint.com>
- <http://www.moneycontrol.com/news/press-release/reporttrendprogressbankingindia-2010-617218.html>
- <http://rbidocs.rbi.org.in/rdocs>

