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TECHNOLOGICAL INNOVATIONS IN INDIAN BANKING SECTOR

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Abstract: The Indian banking system impacts millions of people. And it's expanding at an incredible rate. Due to developments in the worldwide financial system, the function of banking in the context of financial intermediary activities has undergone a fundamental upheaval during the previous three decades. In the last decade, India's banking industry has seen essential financial developments, as well as initiatives that have increased financial inclusion initiatives. RTGS, ATM, NEFT, EFT, ECG, internet banking, free advising services, Retail banking, debit and credit cards, telephone and mobile banking, and many more value-added services and products are a few examples of banking and financial services developments. Globalization of financial systems, decentralization, and technological improvement have all driven financial creativity. Due to increased competition and a broader range of hazards, financial innovation has become essential to better address the various requirements of financial system competitors.

The banking sector in India is confronted with various problems including changing client wants and views and new laws from time to time. The expense of solving these difficulties has forced banks to modify their business practices. This article investigates technological advances in the Indian banking sector and highlights the advantages and difficulties of innovative banking developments. Banks are significantly investing in the implementation of technologies. There is a need to establish an environment that promotes the effectiveness of technology investment and increases the imbalance between revenues and costs related to technological advancement.

Keywords: Financial innovations, Indian banking, ATM, technological changes, financial inclusion

1.0 Introduction

The banking sector in India has a vast history that encompasses conventional banking procedures from the time of the British through the reformation period, the nationalization to bank deregulation, and presently a rising number of international banks in India. Banking in India has consequently had a lengthy journey. The Indian banking sector has experienced several changes. It has seen significant changes in the years since it gained its independence. The transition rate was especially rapid in the 1990s and 2000s, when several developments transformed the way banking was considered, as a consequence of both autonomous and established environmental demands. In the 1990s, the Indian banking sector focused more on innovation and technological advancement. Banks begun to employ technology to deliver higher-quality services more quickly. Customers may now perform their banking from geographically diversified locations that were not previously accessible due to advances in information technology.

2.0 Financial innovation:

Financial innovation in India has the potential to make growth more inclusive by linking millions of people to the banking system. The liberalization of the financial services sector and growing competition within the investment banking industry have surely raised the focus on the capacity to create new products, create better processes, and execute more effective solutions to more complicated financial challenges.
Intense competition among banks has changed the concept of the whole financial sector. Banks are looking for innovative methods to recruit, retain clients, and gain an advantage over other financial institutions. Banks, like other commercial organizations, are creating novel sales approaches and modern marketing technologies to establish dominance. The primary driver of this transition is shifting client desires and perceptions. Consumers in urban India no longer prefer to stand in large lines and spend hours on financial transactions. The change in consumer perceptions has coincided with the growth of mobile phones, ATMs, and online banking, along with the supply of

services directly at the consumer's doorstep. With the advent of unified banking, banks attempt to provide all financial services and products under a single roof, focusing on customers.

3.0 Review of literature:

- **B.janki(2002)** examined how technology affects employee efficiency. Undoubtedly, public sector banks in India must employ technology to enhance operational efficiency and customer service. The study indicates that technological innovation is the only way to attain their objectives.
- **Marton and Bodie(2005)** state that financial innovation helps to ensure smooth system operation and enhances overall system efficiency by decreasing expenses and uncertainty. Financial innovation has been a driving force in propelling the financial sector towards higher economic efficiency.
- **Hua G, (2009)** explores Internet banking adoption in China by operating an experiment to see how users' perceptions of online banking are influenced by the perceived simplicity of use of the platform and the confidentiality guidelines given by the online banking website.

4.0 Research objectives:

- ➢ Understanding the numerous technical developments in the banking industry.
- ➢ Understanding how such technologies assist to the growth of the Indian banking sector.
- ➢ Understanding the many issues encountered by Indian banks in a changing context

5.0 Technological Innovations

Over time, the banking sector in India has also reached new heights. Customer care and fulfillment are becoming primary obligations of banks. In the banking and financial industries, technological advancement has contributed to new product design and delivery developments. Technology allows banks to create innovative systems that meet a wide variety of consumer demands, including several that were previously unimaginable. Several technological developments are listed below:

5.1 ATM: An automated teller machine (ATM) is a computerised telecommunications equipment that allows consumers of a financial institution to make money transfers in public without the assistance of a human employee or bank teller.

ATMs can be internal (placed within the branch premises) or external (positioned anywhere beyond the bank premises). Banks are not obligated to seek approval from the RBI for placing ATMs at locations and extensions counter for which they've obtained Reserve Bank licensing. They can also build far away ATMs without the RBI's clearance. However, companies must get a license from the local branch of the RBI's DBOD (Department of Banking Operations and Development) before operating the ATM, by subsection 23 of the Banking Regulation Act.

5.2 Debit card and credit card: A debit card is a digital card provided by a financial institution that allows bank customers to withdraw money or make payments for products and services from their accounts. This removes the necessity for bank customers to visit the bank to withdraw cash from their bank accounts because they may now go to an ATM or pay digitally at merchant outlets. As a means of making a payment, this sort of card eliminates the need for cheques because the debit card directly transfers money from the customer's account to the company's.

A financial institution provides a credit card and allows the person who holds it to borrow money, generally at the point of sale. Credit cards have interest charges and are often used for short-term borrowing. Payment typically begins within a month following a purchase, and financing limitations are pre-set based on the individual's credit score.
Debit and credit cards issued by private and public sector institutions have increased. On the other hand, Debit cards are an increasingly prevalent form of digital cash than credit cards.

5.3 NEFT (National Electronic Fund Transfer): According to the Reserve Bank of India, National Electronic Funds Transfer (NEFT) is a nationwide banking system that facilitates one-to-one money transfers. Individuals, organizations, and organizations can use NEFT to electronically transfer payments from any bank branch to any other financial institution branch in the country participating in the program. People, businesses, and corporations with accounts at a bank branch may send payments using NEFT. People who do not have an account with a bank may place cash at NEFT-enabled banks with instructions to transfer payments through NEFT. However, such cash transfers would be limited to Rs.50,000/- per transaction. Customers must provide comprehensive information by appointment, such as their entire location, contact information, etc. Thus, NEFT facilitates the transmission of payments even without a financial institution's account. This is a straightforward, safe, secure, rapid, and inexpensive way to transfer payments, particularly for retail transfers.

5.4 RTGS (Real Time Gross Settlement): The Real Time Gross Settlement system (RTGS), established in India in March 2004, is a mechanism that allows bankers to send electronic instructions to transfer monies from their accounts to the accounts of another bank. The RBI maintains and operates the RTGS system, allowing efficient and speedier money transfers across banks, and facilitating their banking activities. Funds transmission between banks occurs in 'Real Time,' as the term suggests. As a result, money may reach the beneficiary immediately, and the recipient's bank is responsible for crediting their account within two hours.

6.0 Challenges faced by the banking sector:

Technological advancements in the Indian banking sector bring distinct possibilities and difficulties for the finance sector. It is critical to develop or acquire the proper technology, deploy it efficiently, and then utilize it to the greatest extent possible to reach and maintain high customer service and effectiveness requirements while being cost-effective and generating an equitable return to shareholders. Managing technology has become a major concern for the Indian banking sector. Due to dispersed and scattered places, many individuals in developing nations, such as India, are not connected to financial services. However, when it comes to consumers who use financial services, their expectations are rising as the quality of services improves due to the development of information technology and intense rivalry among the products and services offered by various banks. When international banks entered the Indian market, the number of services available expanded, and banks focused more on matching customer demands.
There are multiple challenges that Indian banks are currently facing, which are as follows:

- MNCs are a source of competition.
- Decreased client loyalty
- Managing consumers' diverse demands
- Reorganization and rebuilding banks' administrative structures to make them smaller and leaner;
- Dealing with regulatory changes
- Keeping high-quality assets.
- Maintaining and keeping up with technological advancements
- Providing oversight for distressed assets.
- Non-Performing Assets (NPA) Problem

7.0 Conclusion:

India is one of the world's biggest ten economies, and its banking industry has enormous growth potential. Over the past few years, the amount of ATMs in the country has more than quadrupled, with over 100,000 now in circulation (70 percent in metropolitan areas). They are predicted to more than double by 2016, with over half located in small cities. Furthermore, the potential for mobile and online banking is significant. Only 2% of banking transactions in the country were processed electronically in 2013. Today, mobility and customer comfort are considered as important growth factors, and banks are always researching new technologies, with phrases like mobile solutions and cloud computing becoming more common. However, the Indian banking sector has encountered various problems, including increased competition, spread pressure, and structural reforms to match international norms, which have demanded a re-evaluation of strategy and procedures to remain successful in this rapidly evolving market. Banking must take a comprehensive strategy to meet the ever-evolving needs of their clients and gain a larger market share. The objective is to create complex items using low-cost technologies.

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