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## The Role of FinTech in Reshaping Traditional Banking in India

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### ABSTRACT

The Indian banking industry is undergoing a remarkable evolution driven by the rapid emergence of financial technology (FinTech). This review article explores how FinTech has emerged as a transformative force, redefining the traditional banking framework by introducing innovative, customer-centric, and technology-driven solutions. Key areas of disruption include digital transactions, lending platforms, wealth management tools, and regulatory technology. The paper highlights how FinTech has enhanced financial inclusion, improved operational efficiency, and fostered competitive collaboration between banks and startups. It also addresses challenges such as cybersecurity risks, regulatory shortcomings, and obstacles to digital literacy. Through an analysis of current trends, successful partnerships, and governmental initiatives, this review underscores the crucial role FinTech plays in promoting a more inclusive, adaptable, and resilient banking ecosystem in India. The article concludes by emphasizing the need for ongoing innovation, regulatory clarity, and strategic alliances between traditional banks and FinTech companies to ensure sustainable progress in the digital financial landscape.

**Keywords:** *FinTech, Cybersecurity, Banking ecosystem.*

### Introduction

Banking in India has historically been an important part of the country's economy. Traditional banks helped individuals save, borrow, and transact but typically did so using outdated methods that required extensive documentation and physical branch visits. Additionally, traditional banks offered very limited services to people living in rural areas, and their services were slow and cumbersome for countless individuals. These dynamics are rapidly changing with the rise of FinTech (Financial Technology).

FinTech uses technology to provide financial services in a faster, easier, and more accessible way. There are many examples of FinTech in India and these include mobile wallets (such as Paytm and PhonePe), Unified Payments Interface (UPI), digital loan applications, and online investment platforms. FinTech services enable individuals to complete banking services directly from their phones - without visiting a bank branch. Banking is increasingly more convenient and more individuals are able to enter the formal financial system.

The Indian government and Reserve Bank of India (RBI) has supported the growth of digital access through its own programs, such as, Digital India, Jan Dhan Yojana, and the regulatory sandbox to test innovations. Many traditional banks are either collaborating with FinTech companies, or developing their own mobile technology in order to improve services for their customers and remain competitive.

### Operational Definition

FinTech:

FinTech, short for Financial Technology, refers to the application of contemporary technology such as mobile applications, software, the internet, and artificial intelligence to deliver financial services in a quicker, more straightforward, and convenient manner. This encompasses services such as digital payments, online lending, mobile banking, and investment applications that can be utilized at any time via smartphones or computers.

Traditional Banks:

Traditional Banking denotes the conventional and established method of banking where individuals visit physical bank locations to open accounts, deposit or withdraw funds, obtain loans, or carry out other banking activities. These services are primarily managed in person with bank personnel and require documentation and set working hours.

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## Literature Review

Pankaj et al. (2023) examined the expansion of FinTech credit utilizing data from 119 firms during the period of 2019 to 2021. It determines that the quantity of new loan accounts and the amount of credit given have increased by 51% and 42%, respectively. The study contrasts FinTech lending with traditional commercial banks, highlighting that although FinTech credit is expanding, it remains behind in both volume and value.

Usman Ghani (2024) recognized and examined the main factors behind FinTech disruption, including technological progress, regulatory shifts, consumer demands, and competitive forces. It evaluates their influence on traditional banking entities, emphasizing the adaptive tactics used by established banks to stay competitive in a fast-changing financial landscape.

Jaydev Kosuru et al. (2024) explored the changing impacts of FinTech on conventional banking, emphasizing significant aspects like adoption rates, customer engagement, operational effectiveness, and related risks. It shows a swift rise in FinTech uptake by banks and notable changes in customer communication methods.

Loso Judijanto (2025) provided an extensive bibliometric review of academic literature regarding the impact of FinTech on traditional banking. It delineates the cognitive framework, thematic development, and partnership networks in the domain, emphasizing significant thematic groups like digital transformation, regulatory innovation, artificial intelligence, financial inclusion, and sustainability.

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## Overview

Numerous studies indicate that FinTech is transforming the operations of banks in India. FinTech utilizes technology such as mobile applications, internet payments, and digital lending to streamline banking processes and enhance convenience for all. These modifications are influenced by improved technology, evolving customer demands, and assistance from government and regulatory bodies.

Studies show that FinTech firms are expanding rapidly, particularly in providing loans over the internet, yet conventional banks continue to manage the majority of lending activities. FinTech is assisting individuals and small enterprises that previously faced challenges in obtaining loans. It is also enhancing banking convenience by providing services through phones, minimizing paperwork and wait times.

The research also describes how conventional banks collaborate with FinTech companies or develop their own digital offerings to stay competitive in the rapidly evolving market. They encounter difficulties such as protecting customer information and adhering to regulations.

Ultimately, the study reveals that FinTech is more than simply innovative tools—it is transforming the entire banking landscape in India. It allows additional individuals to enter the financial system, improves services, and encourages banks to innovate further. To achieve success, banks and FinTech firms must collaborate and address issues concerning security and regulations.

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## Digital Payments Revolution

Digital payments refer to the transfer of money through electronic means rather than using cash or checks. With the advent of smartphones and the internet, individuals can now swiftly and securely make payments through apps, websites, or merely a phone number.

In India, electronic payments have seen significant growth over the past few years. Applications such as Paytm, Google Pay, and platforms like UPI (Unified Payments Interface) enable users to transfer funds immediately between bank accounts. You can settle grocery bills, pay expenses, or transfer funds to friends without visiting a bank or ATM.

This shift is referred to as a Digital Payments Revolution because it simplifies payments, accelerates transactions, and expands access for a greater number of individuals — including those in rural areas lacking nearby banks. It is also aiding in business growth by minimizing cash management and streamlining accounting processes.

In general, digital payments are changing the way Indians purchase, sell, and handle money, creating a more digital and interconnected economy.

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## Technology-Driven Lending Platforms

Technology-based lending platforms are web-based systems that assist individuals and businesses in obtaining loans swiftly via the internet and computers instead of going to a bank branch. These platforms utilize applications or websites that allow you to request a loan, making the process quicker and easier.

In India, numerous FinTech firms provide loans via these digital platforms. They utilize technology such as data analysis and artificial intelligence to determine if an individual can repay the loan, commonly leveraging information beyond merely conventional credit scores. This assists individuals without a solid banking history, such as small enterprises or new borrowers, in obtaining loans with ease.

These platforms accelerate the borrowing process by minimizing paperwork, allowing decisions to be reached in hours or days rather than weeks. They also enable individuals to borrow from any location, simply using their phone or computer.

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## Successful Partnerships

Sometimes, conventional banks collaborate with FinTech firms to provide enhanced services to their clients. These collaborations enable banks to swiftly adopt new technology and assist FinTech companies in connecting with a larger audience.

- PhonePe and ICICI Bank: The widely-used digital payment application PhonePe has teamed up with ICICI Bank to enable users to transfer money rapidly and settle bills conveniently. This assisted both the bank and the app in expanding their clientele.
- HDFC Bank teamed up with Paytm, a leading mobile wallet in India, to provide digital banking services and loans via Paytm's application. This simplified the process for customers to access banking and loan services via their phones.
- YES Bank and Razorpay: YES Bank partnered with Razorpay, a payment processing firm, to offer companies convenient digital payment options. This allowed small businesses to receive online payments rapidly.
- These collaborations demonstrate how banks and FinTech firms can collaborate to leverage technology and access a wider customer base, simplifying and accelerating banking for all.

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## Open Banking and API Integration

Open Banking allows banks to securely share certain customer information with other businesses (such as FinTech applications) through a specific technology referred to as APIs (Application Programming Interfaces). This allows various financial services to collaborate more effectively.

Consider APIs to be bridges or links that enable applications to communicate securely with banks' systems. For instance, when you utilize a budgeting app, it can link to your bank account (with your consent) and display all your expenses in a single location.

In India, open banking is expanding, and banks are beginning to permit FinTech firms to access customer data (with consent) to provide innovative services such as convenient payments, quicker loans, or tailored financial guidance.

Why does it matter?

- It assists clients in obtaining improved and more tailored financial services.
- It simplifies transferring funds between banks and applications.
- It promotes innovation as numerous companies can create new tools that integrate with banks.
- It enhances competition, potentially resulting in reduced costs and improved services.

When you utilize a mobile application to pay your bills, that app may employ APIs to link with your bank and automatically retrieve your payment information or check your balance without requiring you to open the bank's application.

In short, open banking through API integration enhances the ease, speed, and connectivity of banking and financial services, while also ensuring the security of your data.

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## Government and Regulatory Initiatives

The Indian government along with financial authorities such as the Reserve Bank of India (RBI) has initiated numerous initiatives and regulations to promote the advancement of digital banking and FinTech. These efforts contribute to making banking more accessible, secure, and convenient for a larger number of people throughout India. They likewise safeguard consumers and ensure that businesses comply with regulations.

A few significant initiatives include:

- Digital India: An initiative by the government aimed at enhancing internet accessibility and promoting the use of digital resources, such as online banking and digital transactions.
- Jan Dhan Yojana: An initiative designed to assist countless individuals in opening bank accounts, particularly for those who previously lacked any, enabling them to save funds and access government benefits.
- Unified Payments Interface (UPI): A system created with RBI backing that enables users to transfer and receive money instantly via mobile devices.
- Regulatory Sandbox: A secure environment established by RBI for FinTech firms to experiment with new products and services under guidance prior to their complete launch.

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## Challenges and Barriers

Although digital banking and FinTech are rapidly expanding in India, several challenges and issues continue to hinder advancement.

Common Challenges:

- Insufficient internet access and smartphones: A significant number of individuals, particularly in rural areas, lack reliable internet or smartphones, making digital banking difficult for them.
- Digital literacy: Certain individuals lack the knowledge to use applications or online banking securely, hindering their ability to embrace new technology.
- Cybersecurity threats: Online banking and digital transactions may attract hackers and fraudsters. Safeguarding customer information and finances is a significant difficulty.
- Regulatory challenges: At times, ambiguous or rigid regulations can hinder new FinTech firms from launching or expanding.
- Trust concerns: A lot of individuals continue to have greater faith in cash and conventional banks compared to digital platforms, hindering widespread acceptance.
- Infrastructure issues: Financial institutions and FinTech firms require robust technology and support networks, which can be costly and intricate to develop.

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## Future Outlook

FinTech keeps changing quickly with new ideas and technologies. Here are some important trends shaping the future of finance:

- Artificial Intelligence (AI) and Machine Learning
- AI refers to the use of intelligent software that can learn from information and make choices similar to a person. Financial institutions utilize AI to identify fraud by recognizing atypical transactions, assist clients with chatbots available around the clock, and accelerate loan approvals by swiftly assessing an individual's repayment capability. Machine learning enhances these processes gradually by gaining insights from new data.
- Blockchain and Cryptocurrencies

Blockchain is a unique technology that captures transactions in a secure and transparent manner. It enhances the security of digital payments and minimizes fraud. Cryptocurrencies such as Bitcoin utilize blockchain technology to enable direct money transfers between individuals without the need for banks. In India, blockchain is being experimented with for applications such as land records and tracking supply chains, enhancing trust and transparency.

- Buy Now, Pay Later (BNPL)

BNPL enables individuals to acquire products right away while making payments in small monthly installments with no additional interest (if paid punctually). It's widely used in online shopping and assists individuals in handling their finances more effectively. Numerous FinTech applications currently provide BNPL features, allowing customers to purchase items without needing large loans.

- Digital-only Banks (Neobanks)

Neobanks are financial institutions that operate exclusively via mobile applications or websites, lacking any physical locations. They provide quick services such as immediate account openings, no-cost digital payments, and minimal fees. Since they don't need to operate branches, they can concentrate on improving technology and enhancing user experience. They are gaining popularity among young individuals and tech-oriented consumers.

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## Conclusion and Discussion

FinTech is transforming the banking system in India. Thanks to advancements in technology such as mobile applications, digital transactions, online lending, and AI, banking has transformed into a quicker, simpler, and more accessible process—particularly for individuals who were previously excluded.

Conventional banks are not the sole choice anymore. FinTech firms are providing individuals with greater options and improved services. Concurrently, numerous banks are embracing digital technologies or collaborating with FinTech companies to remain current.

The government and RBI are crucial by establishing regulations and launching beneficial initiatives such as UPI, Jan Dhan Yojana, and the Regulatory Sandbox. These measures have motivated additional individuals to participate in the official financial system.

Nonetheless, certain challenges remain. Not everyone has access to the internet or is familiar with using digital applications. Concerns about security and privacy are significant as well. For this reason, increased awareness, improved internet, and enhanced safety measures are essential. In the coming years, trends such as AI, blockchain, open banking, and exclusively digital banks will continue to expand. With collaboration among traditional banks, FinTech firms, and the government, India can emerge as a global frontrunner in digital banking.

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