



Original Article

Digital Banking and Fin-Tech in India

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Abstract

The financial sector in India has witnessed a paradigm shift with the advent of digital banking and financial technology (Fin-Tech). This paper explores the key trends driving this transformation, stakeholders' challenges, and potential future developments. The study examines the growth trajectory of digital banking and Fin-Tech in India, focusing on innovations, regulatory frameworks, and consumer adoption. It also highlights the barriers to growth, including cyber security threats, financial literacy gaps, and regulatory complexities. Digital banking and fin-Tech in India have revolutionized the financial sector, providing greater accessibility, efficiency, and convenience for consumers and businesses. With the advent of mobile phones, the internet, and advanced technology, digital banking and Fin-Tech have transformed traditional banking services, enabling customers to access financial products and services online. Digital Banking refers to all the traditional banking services, such as savings accounts, loans, and money transfers, which are now offered through online platforms or mobile apps. Customers can perform transactions like checking balances, transferring money, paying bills, and applying for loans—all from their devices. The rise of mobile banking and internet banking has empowered customers by offering a seamless banking experience at their fingertips.

Fin-Tech (Financial Technology) in India has seen significant growth, as start-ups and established players leverage technology to create innovative solutions for the financial industry. These innovations range from mobile wallets, peer-to-peer lending, and digital insurance, to block chain and crypto currency. The Indian government's push for a cashless economy and initiatives like Digital India has further accelerated the growth of Fin-Tech.

Keywords: Digital banking, Fin-Tech, Digital Payments, Neo-Banks, Blockchain and Cryptocurrencies etc.

Introduction

India's financial ecosystem has undergone significant evolution over the past two decades. The digitization of banking services and the emergence of Fin-Tech startups have disrupted traditional banking models, enabling greater accessibility, efficiency, and inclusion. This paper aims to analyze the current landscape, emerging trends, and the challenges confronting digital banking and Fin-Tech in India.

Objective of Research Paper:

1. To study the Evolution of Digital Banking and Fin-Tech in India.
2. To study the Key Trends in Digital Banking and Fin-Tech.
3. To study the Challenges in Digital Banking and Fin-Tech
4. To study Government and Regulatory Interventions for Digital Banking and Fin-Tech.
5. To study Future Prospects of Digital Banking and Fin-Tech in India

Research Methodology:

The present study is descriptive and is based on secondary data. The data has been extracted from various sources research articles, publications from the Government of India, bulletins of RBI, and authenticated websites.

Review of Literature:

1. Ipsita Paria and Giri (2018):

The research paper entitled "A Literature Analysis on Effect of Digitalization on Indian Rural Banking System and Rural Economy".

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The research study focuses on the influence of digitization on India's rural banking sector. According to the research study, digital banking has massive potential to reform the site of financial inclusion. The research study also covered that low-cost, simple-to-use digital banking can accelerate the integration of the unbanked economy into the ordinary

2. K. Suma Vally and K. Hema Divya (2018):

The research paper focuses on customer adoption of digital payment systems. The research study uses a primary method for data collection from 183 persons in Hyderabad. Chi-square analysis was used to analyze the data collected through questionnaires.

Evolution of Digital Banking and Fin-Tech in India:

I. Pre-Digitization Era:

The Pre-Digitization Era in India refers to the time before the extensive adoption of digital technologies, before the mid-1990s. These are the conventional methods of communication, record-keeping, administration, and commerce. Conservative banking in India was considered by physical branches, manual processes, and limited reach, especially in rural areas.

Widespread digital transformation in India is leading the country into a period of digital governance. The economic industry reform of 1991 related to the interest of foreign multinationals in the Indian market. The Indian market spirals into the development of Indian IT diligence and digital infrastructure. The IT Act was introduced in 2000. It is India's first IT-related regulation. It was followed by the national e-governance plan of 2006.

II. Post-Digitization Era:

The recent digital reforms were introduced in 2015 under the Digital India invention. It aims to connect a population with parliamentary organizations and reduce the divide between digital haves and have-nots. This versatile program transforms the nation's constantly growing digital infrastructure into a communal utility concrete way for digital governance. The unveiled cashless and paperless economy of digital India is gradually making it simpler to access a range of government platforms and services. The introduction of internet banking, mobile banking, and digital wallets marked the opening of the digital revolution. It started the Unified Payments Interface (UPI) in 2016.

Rise of Fin-Tech:

With over 2,000 Fin-Tech start-ups, India has become one of the biggest Fin-Tech markets internationally. It offers solutions in payments, lending capital management, and insurance. The following consequence is being seen on a large scale in India in the current scenario:

- The Digital Banks market in India has witnessed in terms of Net Interest Income.
- This projected to reach US\$ 25.58 billion in 2025.
- The Net Interest Income is predicted to reveal a CAGR 2025-29 of 4.85%, at last leading to a market volume of US\$ 30.91 billion by 2029.
- As compared to India, China will play a vital role in generating Net Interest Income.
- China is estimated to generate a substantial US\$528.8 billion in 2025.
- India's digital banking sector is experiencing fast growth, fuelled by the country's large population and growing smartphone penetration.

Key Trends in Digital Banking and Fin-Tech:

I. Digital Payments:

India's federated digital structure blocks in the form of public infrastructure, jointly called the India Stack include various aspects of a people's digital life. It comprises digital ID and verification such as Aadhar, e-KYC, and e-Sign. The researcher follows digital resources and e-governance services such as UMANG e-platform, Digi-Locker, Common Service Centres (CSCs), etc. Digital services are playing a crucial role in transactions under Bharat Interface for Money (BHIM), National Payment Corporation of India such as United Payment Interface (UPI), RuPay, etc. The *Jan-Dhan-Aadhaar-Mobile* or JAM triplet connects bank account, unique ID, and mobile number, enabling direct cash transfer of financial support to the beneficiaries. The digitalization of government processes has thus also accelerated financial inclusion in rural areas. UPI dealings have surpassed conventional payment methods, compelled by government initiatives like Digital India and demonetization.

II. Neo-Banks:

Neo-Banks are Fin-Tech firms that meaning like banks and operate digitally. It is a collection of financial services and apps. Each transaction is done online and is wholly safe, modified, and more suitable in some aspects compared to conventional banks. Neo-Banks rupture old banking customs such as cash deposits, large documentation, and personal communication with a bank official. Digital banks with no physical branches are gaining traction, offering seamless and custom-made banking experiences.

Neo-Banks in India

Sr.No.	Name of Neo-Bank	Interest Rate	Type of account	Founding Year
01	Freo	Up to 9.1%	Fixed Deposit Account	2015
02	Fi Money	Up to 3%	Personal Saving Account	2019
03	Jupiter	Up to 4.75%	Personal Saving Account	2019
04	Instantpay	-	Business Account	2013
05	Fam Pay	-	Personal Saving Account	2019
06	Mahila Money	-	Business Account	2021
07	Niyo	Up to 7%	Personal Saving Account	2016
08	Razorpay X	-	Business Account	2013
09	Chqbook	-	Business Account	2016
10	Zikzuk	-	Business Account	2020
11	Akudo	-	Business Account	2020
12	Finin	Up to 5%	Personal Saving Account	2019

Sources- <https://freo.money/guides/neobanks-in-india/>

III. Block Chain and Crypto Currencies:

The blockchain technology is being explored for safe transactions and competent record-keeping. Cryptocurrency is a decentralized digital currency. It uses cryptography for security. For instance, Bitcoin, Ethereum, Ripple, Litecoin, etc. The block chain as a recognized public digital ledger for the transactions of Crypto currency. A global computer network is maintaining the ledger of decentralization. This ledger is maintained by a decentralized worldwide network of computers worldwide. New transactions are added to the blockchain after verification.

India's Cryptocurrency business has seen significant revenue growth, reaching an incredible US\$6.4 billion by 2025. The aforementioned growth is expected to continue at a compound annual growth rate (CAGR 2025) of not a number —%, resulting in a predicted total revenue of US\$6.4 billion by 2025. In terms of average revenue per user, the Cryptocurrency industry in India is expected to be around US\$59.6 by 2025. It is worth noting that, when compared globally, the United States leads the pack with the highest revenue, which is predicted to reach \$9,423.0 billion by 2025.

The several users in the market of Indian Crypto Currencies. 107.30 billion users of Crypto Currencies in 2025. The access rate of Cryptocurrencies is expected 7.35% in 2025.

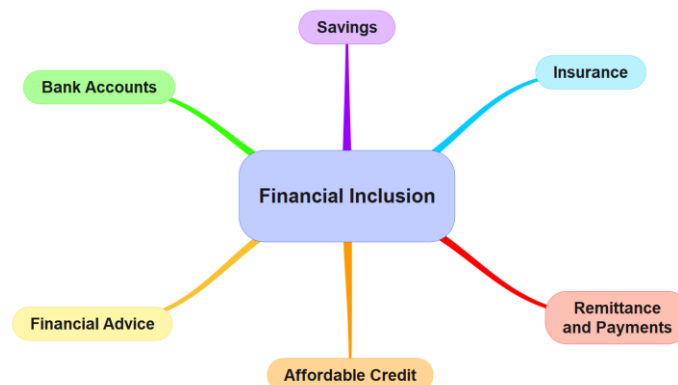
The financial inclusion is included in the rising interest in cryptocurrencies.

IV. Artificial Intelligence (AI) and Machine Learning (ML):

Customized financial services, scam prevention, and client insights are all being facilitated by artificial intelligence technologies. In the world of digitization, the Indian Economy has enhanced the technologies are Artificial Intelligence (AI) and Machine Learning (ML). By the end of 2024, India's AI market is expected to be worth USD 5.47 billion, and by 2030, it will be worth USD 14.72 billion.

V. Financial Inclusion:

Fin-Tech and digital banking are helping the underbanked and unbanked communities close the gap. The RBI Financial Inclusion Index (FI-Index) increased from 60.1 in March 2023 to 64.2 in March 2024. The financial inclusion growth rate is improving in the entire parameters.



Challenges in Digital Banking and Fin-Tech:

1. Cyber Safety and Data Confidentiality:

The digital platform has sensitive concerns to data breaches, hacking, characteristic theft, etc. For the concerned platform common methods of scams should be used such as KYC, Customer Care, Lottery, Debit/ Credit Card, Loan, UPI, Electricity Bill, Task-Based Job, Digital Arrest, Investment and Get Rich Quick Schemes, etc.

2. Regulatory Framework:

Steering India's compound and enhancing the regulatory landscape remains for Fin-Tech companies. The RBI offers Digital Lending Guidelines to regulate digital systems in India. It highlights consumer protection, data security, and the direction of un-licensed technology allies

3. Financial Literacy:

The knowledge, mindset, ethics, and ability required to use resources to make financial decisions and achieve individual financial stability is known as financial literacy awareness. The National Centre for Financial Learning reports that only 27% of adult Indians are financially literate.

4. IV Competition:

Reduced profit margins and market diffusion are the results of fierce competition between traditional banks and Fin-Tech start-ups. Numerous competitors are seeking market share in the fiercely competitive digital banking sector. Among the most prominent online banks are Varo Bank, Monzo, Revolute, and Chime. These digital banks have become well-known for their creative products, which have helped them draw in a sizable clientele. These products include cash-back rewards, budget and savings tools, and other incentives.

5. Infrastructure Gaps:

The adoption of digital services is impeded by several factors, including limited internet connectivity, a low incidence of digital literacy, language obstacles, internet worries, and the prevalence of smartphones in rural regions.

Government and Monitoring Interferences:

1. Role of the Reserve Bank of India:

To foster innovation, the RBI has implemented several regulations about digital payments, data security, and a sandbox setting. To ensure orderly regulation of the offerings based on banking, credit, and payment system products, the RBI provides policies, guidelines, circulars, and guidelines. The RBI is responsible for granting licenses and authorizations to industry participants in its capacity as a regulator.

2. Initiatives for Jan Dhan Yojana:

PMJDY offers each unbanked mature person a single basic bank account. No balance must be maintained for this account, and there are no fees associated with it. To encourage digital transactions in the account, a complimentary RuPay Debit card with an integrated accident insurance coverage of Rs. 2 lakh is also offered.

3. Startups Policy:

Fin-Tech start-ups have expanded because of government initiatives like Start-up India and tax breaks. For example, Paytm and Phone-Pay were able to reach a large audience thanks to the government's push for a digital-first economy and support for digital wallets. However, regulations can also affect startups in several ways, ranging from taxation and intellectual property rights to data security and compliance laws.

Future Projections:

I. Amalgamation of Emergent Technologies:

Development in the industry is anticipated to be fuelled by technologies such as 5G, AI, blockchain, Fin-Tech Cloud Adoption, Regulatory Technology (Reg-Tech), and IoT & Fin-Tech combo.

II. Association between Banks and Fin Techs:

Fin-Tech businesses and conventional banks working together can enhance client experiences and generate synergies. To construct systems on its legacy infrastructure, which would otherwise take years to develop, Indian Bank partners with Fin-Tech companies. This alliance rapidly provides a large variety of services and goods. Financial services, as well as deposits, lending, remittances, credits (B2B and P2P), underwriting, insurance, and cryptocurrency, have been significantly impacted by Fin-Tech technologies including blockchain, artificial intelligence, and data analytics.

III. Rural Markets:

To achieve financial inclusion at scale, it will be essential to adapt solutions for rural communities. Using technology to expand financial inclusion to the enormous rural population of India, rural fin-tech stands out as a compelling way to overcome this inequality. From smallholder farmers to isolated villages, these Fin-Tech initiatives customize their goods and services to fit the particular requirements and difficulties of rural populations.

IV. Sustainable Finance and Investment:

Green finance and sustainable investments ought to be promoted by Fin-Tech and digital banking. Data science and artificial intelligence are paving the way for a sustainable industry. For the sustainable finance sector, the most potential Fin-Tech technologies are artificial intelligence and advanced data science.

Conclusion:

Fin-Tech and digital banking are revolutionizing India's financial sector. Making it more inventive, efficient, and inclusive. Even though the industry has many obstacles. Its full potential is realized with the cooperation of all parties including

the government, regulators, and private companies. It is anticipated that fin-tech and digital banking in India would have a bright future with opportunities for growth, innovation, and social influence.

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Conflicts of interest

There are no conflicts of interest.

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