

## Fintech Disruption and Its Effect on the Profitability of Indian Banks: Public vs. Private

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### *Abstract*

Fintech, or financial technology, is revolutionizing the financial sector by offering innovative alternatives to traditional banking and financial services. This study explores the evolution of fintech and its impact on the profitability of public and private sector banks in India. Using data from PricewaterhouseCoopers (PwC), KPMG, the Reserve Bank of India (RBI), and the Social Science Research Network (SSRN), the research examines fintech's historical development, market size, and growth in the Indian banking sector. With India emerging as one of the fastest-growing fintech markets globally, the sector is driving a transformative shift in banking operations and consumer behavior. Fintech services are not only enhancing financial accessibility and efficiency but also redefining the competitive landscape of the industry. This paper highlights the disruptive influence of fintech on Indian banks and its implications for the future of digital finance.

**Keywords:** Fintech, Digital Finance, Banking Sector, Financial Technology, Indian Banks, Market Growth

### **1. Introduction:**

FinTech has the potential to revolutionize the financial landscape by offering consumers a wider range of financial products at competitive prices while enhancing the efficiency of financial institutions. The rapid advancements and transformative changes driven by FinTech require continuous monitoring and evaluation to ensure that regulators and society can adapt to the evolving technological and entrepreneurial dynamics.

This article provides a comprehensive overview of the FinTech sector, covering its evolution, key characteristics, and driving factors at both global and Indian levels. For a sustainable financial ecosystem, FinTech firms must bridge the digital divide and encourage inclusive customer participation. Modern banking in India traces its origins to the late 18th century. Over the years, the banking sector has evolved significantly, from the colonial era to post-independence, and through phases of nationalization and liberalization. In the 21st century, technology-driven innovations, along with government initiatives such as UPI, have propelled India's banking sector to the forefront of the global FinTech revolution. According to a May 2019 report by PricewaterhouseCoopers (PwC) and the Associated Chambers of Commerce and Industry of India (ASSOCHAM), India's FinTech adoption rate stands at 57.9%, the second highest globally. (Agarwal, M., & Staff, I., 2019).

## 2. Review of Literature:

Srinivasan, K., and Rajarajeswari, S. (2021) discuss the key issues surrounding fintech, including its drivers, the shortcomings of traditional financial services, and the role of technological advancements. The paper also addresses challenges related to fintech investment and disruption, focusing on areas like investment management, customer management, and regulation. It explores the evolution of fintech in the global market over time.

Kandpal, V., and Mehrotra, R. (2019) highlight the growth of cashless transaction systems, noting that globalization and the development of the banking sector are accelerating the shift from cash to cashless payments. The cashless system is no longer just a necessity but an integral part of modern financial operations. In India, efforts to drive financial inclusion have had mixed results, but access to bank accounts has dramatically increased, driven by strong policy and regulatory support.

Raj, B., and Upadhyay, V. (2020) define "FinTech" as a blend of "financial" and "technology," describing it as technology-enabled financial innovation that leads to new business models, applications, processes, or products with significant effects on financial markets, institutions, and service provision.

Vijai, C. (2019) explains that fintech, as a financial technology, offers alternative solutions for banking and non-banking financial services. The paper examines the opportunities and challenges within the fintech industry, providing an overview of its evolution and its current role in the Indian finance sector.

M, C. S., and R, K. (2019) explore how the internet has disrupted several traditional industries, such as the music industry, which was overtaken by online streaming, and retail, where street shops were replaced by e-commerce. Contrary to earlier beliefs, the finance industry has not been immune to these changes. In fact, it is evolving faster than most other industries in the modern era.

Chugh, B. (2020) explores the regulation of fintech in India, aiming to answer the question of how it is governed. The paper begins by analyzing the types of consumer-facing fintech activities that are prevalent in the country, identifying fourteen distinct categories. These activities together form a comprehensive typology of consumer-facing fintech services in India.

Pant, S. K. (2021) defines fintech as the use of technology to provide banking and financial solutions to both individual and enterprise customers. It is one of the fastest-growing sectors worldwide, with India ranking among the top three fintech startup hubs globally. Key technologies employed by fintech firms include blockchain, cryptocurrency, artificial intelligence (AI), data analytics, machine learning, big data, robotics, and cloud computing. The growth of fintech has been further supported by the domestic and global broadband infrastructure established by telecom service providers, which has provided the essential foundation for fintech development.

### **3. Methodology of the study**

The growing influence of FinTech has compelled banks to adapt their operations and confront the increasing competition from both financial and non-financial institutions offering financial products and services at competitive rates. This necessitates that financial organizations invest in FinTech to ensure they provide high-quality, innovative products and services that align with their customer-centric mission and vision. Additionally, it will support various startups and banking firms in enhancing the financial landscape, which is crucial for the sector's development. To remain competitive, every financial institution must stay up-to-date with evolving standards and requirements to effectively manage the intensifying competition.

#### **3.1 Objective of the study**

- To examine the impact of fintech on the profitability of public and private sector banks in India.
- To explore the drivers and challenges of fintech adoption in the Indian banking sector.
- To evaluate the competitive dynamics between public and private sector banks considering fintech disruptions.

### 3.2 Data Collection Sources:

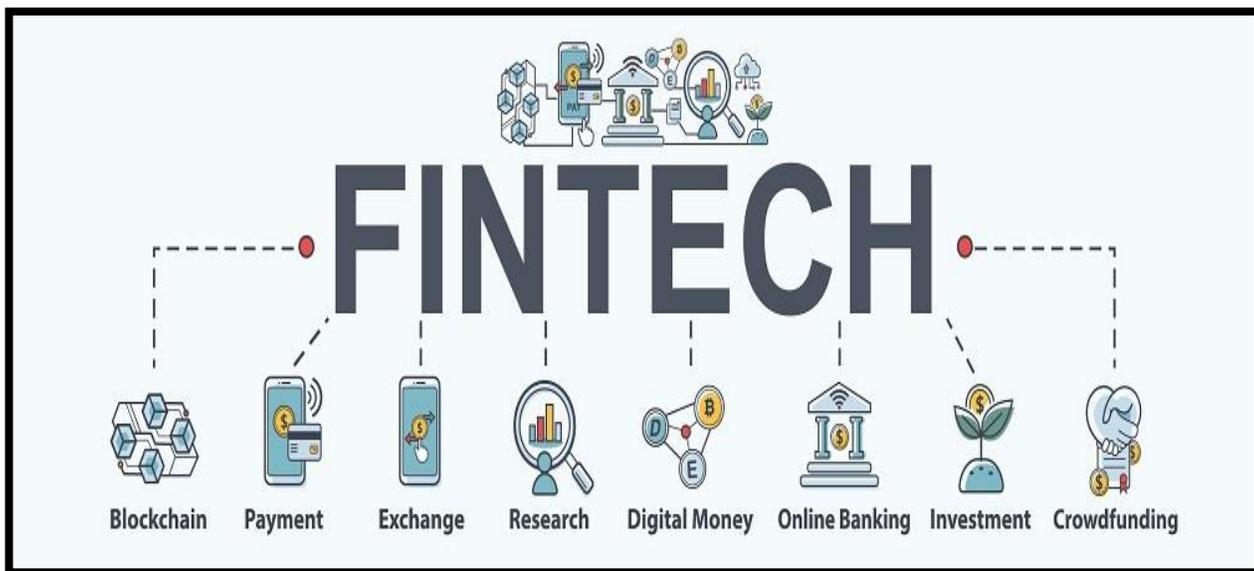
Data refers to information that has already been collected by someone else and has undergone statistical processing. In this study, the data has been sourced from various secondary channels, including newspapers, the internet, books, magazines, reports, publications, and journals.

### 3.3 Research Hypothesis:

H<sub>0</sub>: FinTech has no impact on the profitability of selected public and private banks.

## 4. Analysis and Results

Fintech, or Financial Technology, combines finance and technology to improve services and efficiency. It includes innovations like ATMs and stock exchanges, driving digital transformation in the industry. Fintech has been evolving for decades, reshaping financial services globally.



**Figure-1:** Sectors in FINTECH Industry

#### 4.1 Global investment:

1H24 witnessed a decline in global fintech investment amid the high-interest-rate environment and significant global geopolitical uncertainty. The decline in deal value was partly due to the decline in large deals as fintech investors became cautious with their investments. Total global investment declined to USD51.8bn in 1H24 from USD62.3bn in 2H23.

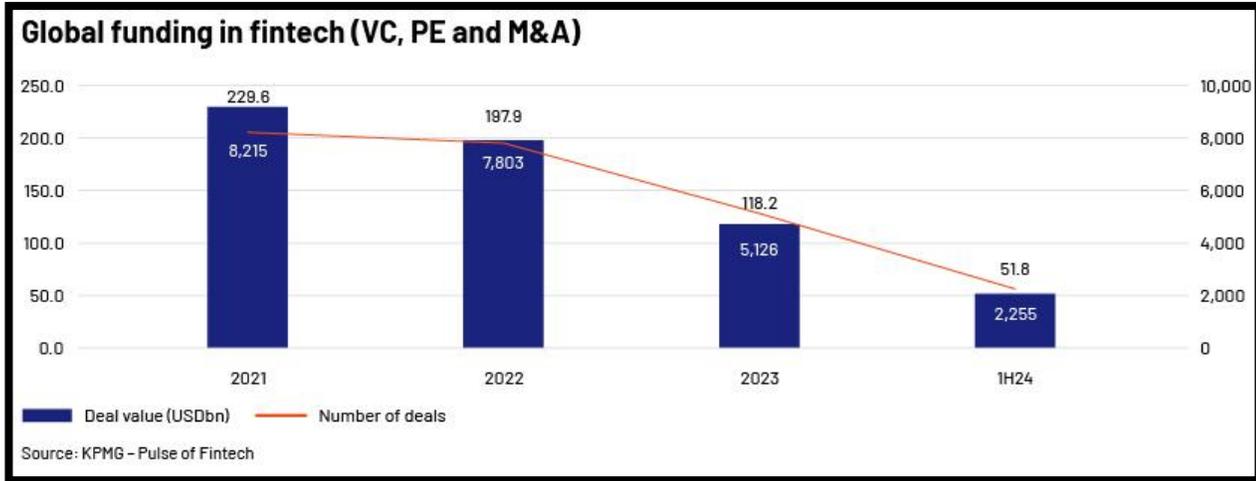


Figure-2: Global funding fintech deal value

### 4.2 Payments Lead Fintech Investments Globally

Fintech and payment sectors continue to attract major investments, with large buyouts shaping the industry. Private equity giants like Blackstone and Carlyle favor these sectors due to strong revenue growth and high margins. Recent notable acquisitions include Nuvei (USD 6.2B by Advent), Coupa (USD 8.0B by Thoma Bravo), and Worldpay (USD 12.5B by GTCR).

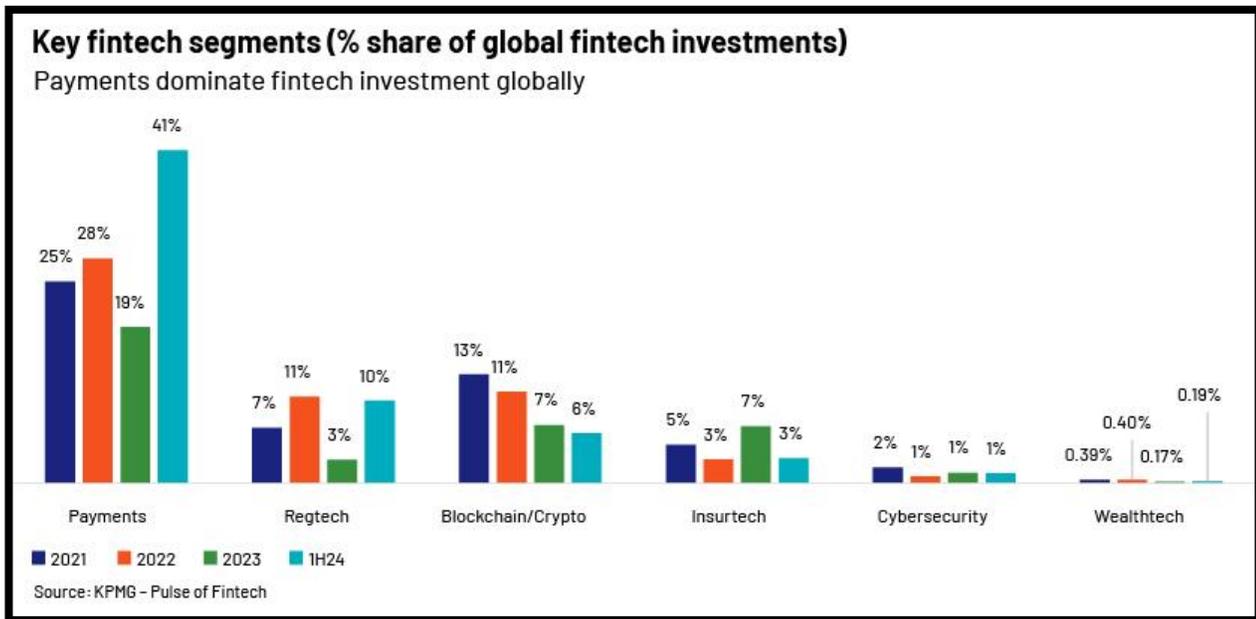
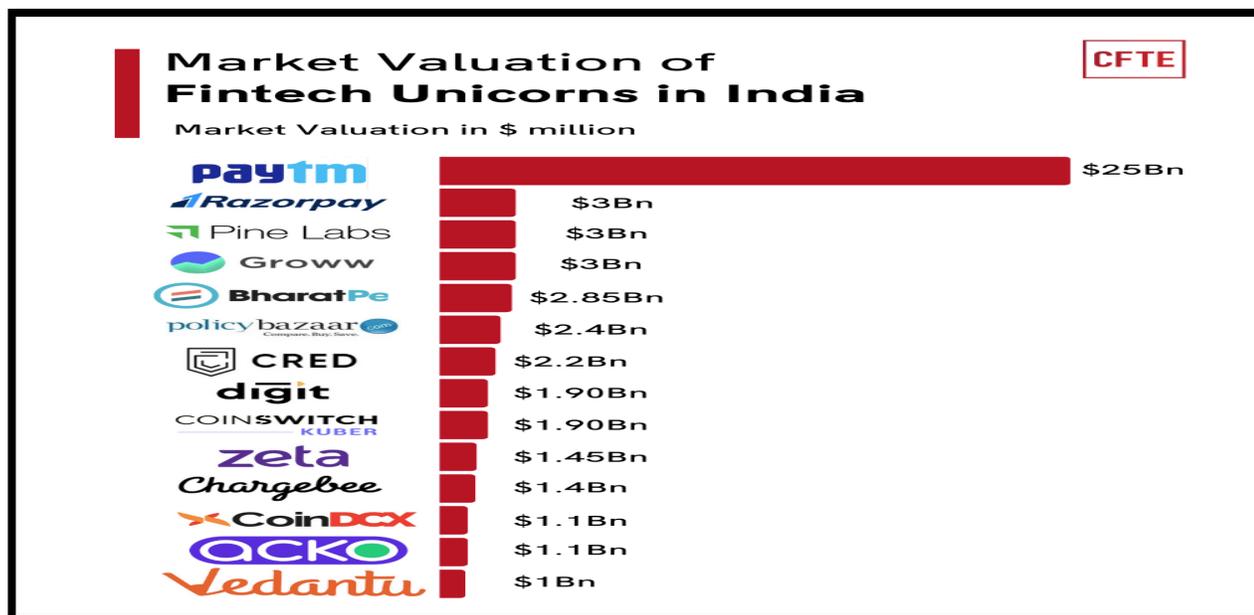


Figure-3: Key Fintech Segments

### 4.3 India Fintech Market Analysis

The Indian fintech market is projected to grow from USD 145.09 billion in 2025 to USD 550.21 billion by 2030, at a CAGR of 30.55%. India has emerged as a fintech hub, with startups like Paytm, Pine Labs, PayU, and Fair cent leading the sector. SoftBank and other investors actively support fintech growth, while government initiatives promoting digitization and a cashless economy drive consumer adoption.

The rise of digital commerce, AI, blockchain, IoT, and mobile POS devices has accelerated market expansion. Digital channels now power 80% of banking transactions in top banks, with remittance services like FXNetworks, InstaReM, and Remitly gaining traction. Many fintech firms collaborate with banks to develop innovative solutions, supported by the Reserve Bank of India's startup financing and relaxed FDI limits in Insurtech.



Figur-4: Fintech market size in India

The chart showcases the market valuation of fintech unicorns in India, highlighting **Paytm** as the leader with a massive **\$25 billion** valuation. Following Paytm, **Razor pay, Pine Labs, and Grow** each hold a **\$3 billion** valuation, indicating strong growth in payments and investment platforms. Other key players like **BharatPe (\$2.85B)**, **Policy Bazaar (\$2.4B)**, and **CRED (\$2.2B)** contribute to the sector's expansion. Additionally, fintech firms like **Digit, Coin Switch Kuber, Zeta, and Charge bee**, valued between **\$1.4B–\$1.9B**, reflect the sector's diversity across payments, lending, and Insurtech. The data highlights India's thriving fintech ecosystem, driven by innovation and increasing investor interest.

#### 4.4 Large Fintech Funding in India

Here’s an overview of major fintech funding rounds in India, highlighting key players, their business category, investment period, and total deal value.

**Table-1:** Analysis of Large Fintech Funding in India

Player	Business Category	Investment Period	Total Deal Value (USD)
Paytm	Digital Payments & Banking	Multiple Rounds	\$4.4 Billion
PhonePe	Digital Payments & UPI	2023	\$850 Million
Pine Labs	Merchant Payments & BNPL	2022	\$865 Million
Razor pay	Payment Gateway & Fintech Services	2022	\$375 Million
BharatPe	Merchant Payments & Lending	2021	\$370 Million
Policy Bazaar	Insurance Aggregator	2021	\$761 Million (IPO)
CRED	Credit Card Payments & Rewards	2022	\$140 Million
CoinDCX	Cryptocurrency Exchange	2022	\$135 Million
Zerodha	Stock Trading & Investments	Self-funded	N/A

Source: [www.investindia.gov.in](http://www.investindia.gov.in)

These investments reflect the growing confidence of global and domestic investors in India's fintech ecosystem, with a strong focus on digital payments, lending, insurance, and crypto exchanges. Let me know if you need further details!

#### 4.5 IMPACT OF FINTECH ON BANKING SECTOR

The rise of **Financial Technology (FinTech)** has significantly transformed the **banking sector**, revolutionizing service delivery, enhancing customer experience, and intensifying competition. Below are some of the key ways FinTech is reshaping the industry.

- **Enhanced Customer Experience**
  - a) **Digital Banking:** The adoption of mobile and online banking enables customers to access financial services anytime, anywhere.
  - b) **Personalized Services:** AI-driven chatbots, robo-advisors, and big data analytics provide customized financial insights, improving customer engagement.

➤ **Increased Competition**

Traditional banks face growing competition from **neobanks** (digital-only banks) and FinTech startups offering faster, more user-friendly services. Customers benefit from a wider range of options, prompting banks to enhance their digital offerings.

➤ **Faster and Cost-Effective Transactions**

a) **Blockchain & Cryptocurrencies:** Blockchain technology ensures **secure, transparent, and low-cost cross-border transactions**.

b) **Instant Payments:** FinTech enables **real-time fund transfers** through platforms like UPI, PayPal, and mobile wallets, reducing dependency on traditional banking channels.

➤ **Financial Inclusion**

FinTech expands access to banking services, particularly for the **underbanked and unbanked populations**, via mobile banking and microfinance. Digital lending, peer-to-peer lending, and microloans empower small businesses and individuals by providing easier access to credit.

➤ **Regulatory and Compliance Challenges**

The rise of cryptocurrencies, digital lending, and online transactions poses regulatory challenges for central banks and financial authorities. Stricter compliance measures and improved cybersecurity frameworks are essential to protect customer data and maintain financial stability.

➤ **Cost Efficiency for Banks**

Automation and AI-powered chatbots reduce the need for human customer service, lowering operational costs. Cloud computing minimizes infrastructure expenses, allowing banks to scale operations efficiently.

➤ **Cybersecurity and Fraud Prevention**

The surge in digital transactions has led to an increase in cyber threats, data breaches, and financial fraud. Banks are investing in advanced cybersecurity solutions, such as biometric authentication, AI-powered fraud detection, and blockchain technology, to enhance security.

➤ **Open Banking and API Integration**

Open Banking allows third-party providers to access financial data securely via APIs, fostering innovation in financial services. Banks are collaborating with FinTech firms to create **seamless and integrated banking experiences** for customers.

#### 4.6 FUTURE OF FINTECH IN INDIA: 5 KEY TRENDS

India's **FinTech sector** is evolving rapidly, driven by **digital adoption, AI, blockchain, and financial inclusion**. Here are five key trends shaping its future:

- **Dominance of Digital Payments**
  - **UPI Expansion:** Continued growth in domestic and international markets.
  - **CBDC (Digital Rupee):** India's Central Bank Digital Currency (CBDC) will enhance secure digital transactions.
  - **Contactless Payments:** NFC, QR codes, and biometric payments will see wider adoption.
- **AI, Big Data, and Automation in Financial Services**
  - **AI-powered chatbots, robo-advisors, and automated lending** to enhance efficiency.
  - **Big Data & Predictive Analytics** to improve credit scoring and fraud detection.
  - **RegTech solutions** for automated compliance and KYC/AML monitoring.
- **Growth of Digital Lending and Financial Inclusion**
  - **Alternative credit scoring** to provide loans to the underserved.
  - **MSME-focused lending platforms** will drive economic growth.
  - **Expansion of Aadhaar-enabled banking and mobile finance** in rural areas.
- **Blockchain and Cryptocurrency Innovations**
  - **Blockchain adoption in banking** for secure transactions and smart contracts.
  - **Rise of Decentralized Finance (DeFi)** if regulatory frameworks permit.
  - **Government-backed CBDC (Digital Rupee)** to drive blockchain-based transactions.
- **Cybersecurity, Open Banking, and API Integration**
  - **Enhanced cybersecurity measures** with AI-driven fraud detection and biometric security.
  - **Open Banking & API frameworks** will foster innovation and collaboration between banks and FinTech startups.
  - **Stronger data protection laws** (DPDP Act, 2023) to ensure secure financial transactions.

## CONCLUSION:

The FinTech revolution is significantly transforming India's financial sector by enhancing digital banking, payments, and financial inclusion. Innovations in AI, blockchain, and automation are improving efficiency, customer experience, and financial accessibility. The rapid growth of digital payments, driven by UPI and the introduction of India's Central Bank Digital Currency (CBDC), is making transactions faster, safer, and more seamless. Digital lending and alternative credit scoring are helping MSMEs, and underserved populations gain better access to financial services. However, regulatory challenges, cybersecurity threats, and data privacy concerns require continuous oversight and stringent compliance measures. Open Banking

and API integration are fostering collaboration between traditional banks and FinTech firms, enabling more innovative financial solutions. Blockchain and decentralized finance (DeFi) have the potential to revolutionize transactions further if regulatory frameworks evolve. Cost efficiency through automation, AI-powered chatbots, and cloud computing is helping banks scale their operations while reducing expenses. Investment in cybersecurity, fraud prevention, and AI-driven risk management is crucial to maintaining a secure and reliable financial ecosystem. As India's FinTech ecosystem expands, continuous innovation, strategic investments, and supportive policies will be essential for its sustainable growth.

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