

## Financial Technology Services in India

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### ABSTRACT

Digital banking has revolutionized the way Indians access financial services. With the advent of technology, banks and financial institutions have introduced various digital banking services to cater to the growing demand for convenient and accessible banking. Here are some of the types of digital banking services available in India. This paper is based on the secondary data collected from the various websites, research papers and reports. The main aim of this paper is to describe the impact of digitalization on inclusive growth in India. This paper describes Internet Banking, Mobile Banking, Digital Wallets, Unified Payments Interface (UPI), Mobile Payment Apps, Online Fund Transfer, Bill Payment Services, Digital Loan Services, Investment Services, Digital Insurance Services, Cardless Cash Withdrawal, Aadhaar-enabled Payment System (AePS).

**Keywords--** Financial Technology, Digital Banking Services, India

PACS should do the campaigns for the awareness of farmers (Goswami D. and Jindal M., 2021). Banks need to provide more and efficient service-related information to the customers, reduce the service charges, improve the resolving procedure (Dr. Saxena S. and Jindal M. 2021). Bank financial service quality depends on the Infrastructure and Instruments of Bank, Staff Competency and Financial Activities available in the bank (Jindal M., 2020). It has been found that online banking playing an important role in the Covid-19 period to protect people (Jindal M. and Dr. Sharma V.L., 2020). Online financial services of SBI is good (Jindal M. and Dr. Sharma V.L., 2020). Some banks have less digital banking services to provide financial technology services to their customers (Arya N. and Jindal M., 2020). Digital Technological Banking services are as important services as traditional banking services (Jindal M., 2019). Indian Rural Cooperative banks are providing mostly services according to rural people but some services aren't providing according to rural people these are very less providing of online banking services (Prof. Joshi C.S., Dr. Jindal M., 2022). Co-operative banks fulfil the over 50% rural credit need of total rural credit need in India but these banks have less digital technology environment (Jindal, M., and Srivastava, S., 2021). Migration from rural to urban is happening due to online banking facilities and other facilities are less available in the rural areas specially is hilly rural areas (Pokhariya, P., and Jindal, M., 2022). Hindi is a major language for Small traders of India but mostly financial technologies are available in English (Jindal, S. and Dr. Jindal, M., 2022). 12 public, 20 private and many other banks are providing digital banking services in India even UPI services also depend on commercial banking services (Dr. Jindal M., 2023). Online banking includes internet banking, mobile banking, online work through debit and credit card and any other bank related work done through the use of the internet. Nowadays online banking work has significant increase due to banking from home, internet facility and mobile devices availability have increased. In the year of 2018-19, 37% transaction was online of SBI and it was a big part of online transaction in the future online banking may take place of the branch banking. e.g. Phone pay, Google Pay, Pay tm, BHIM App, PNB Mobile

### I. INTRODUCTION

Digital banking has revolutionized the way Indians access financial services. With the advent of technology, banks and financial institutions have introduced various digital banking services to cater to the growing demand for convenient and accessible banking. Here are some of the types of digital banking services available in India.

As the suggestions, these banks should provide more types of services because only 57.05% provided by these banks, especially online banking must be provided by these banks (Jindal M., 2021). Urban Co-operative Bank needs to improve the parking facility, interest rate on the loan, and online banking services (Jindal M. and Srivastava S., 2021). Bank contributes a crucial role in the economic growth of a nation by inserting and steering all the financial services (Srivastava S. and Jindal M., 2021). In terms of management efficiency also public sector banks are need to put the efforts to enhance their management capabilities (Dr. Chandra V., Srivastava S. and Jindal M. 2021). Primary Agriculture Credit Society needs to be aware of farmers in their society. For this,

Banking, SBI Yona App, PNB Retail Banking, Kotak Mobike Banking, Axis Bank Mobile Banking, HDFC Mobile Banking and etc (Jindal, M., and Dr. Sharma, V.L., 2021). It is not argumentative that Banks are high help in the growth of the economy by providing it invaluable services. We can't be able to imagine an online Share Market such as a Stock market without banking services and banks are the main way of monetary transaction (Jindal, M., Garg, V. & Goswami, D., 2021).

## II. REVIEW OF LITERATURE

(Nguyen et al., 2023) The research findings are significant in helping investors recognize the limitations of their financial literacy. These insights can guide investors in developing strategies to improve their financial knowledge, enhancing their competitive edge. Moreover, securities market regulators and policymakers might consider implementing training programs for market participants and exploring the integration of basic financial education into high school curricula.

(Schuhen et al., 2022) The online tools offered by banks and finance portals, as discussed in the study, can be beneficial but often do not align well with consumer needs and capabilities. The findings indicate that financial guidance could have made a positive impact, as consumers performed worse without it. This highlights the need for financial institutions to reassess and, if needed, enhance their service offerings with innovative support measures.

(Gautam et al., 2022) Technological advancements are quickly transforming various sectors, especially finance, making digital literacy an essential skill to keep pace with these changes. This study explores the impact of financial technology—evaluating factors such as ATM deployment, the number and value of KCCs—on digital literacy across Indian states and Union Territories. Additionally, the study examines how poverty influences this relationship.

(Xu et al., 2021) The impact of e-commerce adoption on participation in the digital financial market is crucial for both online product suppliers and consumers in today's digital economy. This study also adds to the literature by clarifying how different aspects of e-commerce, such as online buying and selling, affect farmers' use of various digital financial tools, including digital payments, digital wealth management, and digital credit.

(Prabhakaran & Mynavathi, 2023) Mobile banking is more commonly used by older and educated individuals, while mobile payments are primarily adopted by younger people, particularly those in urban and metropolitan areas. Compared to others, students are less inclined to use mobile banking, and salaried employees are less likely to use mobile payments. Financial education has

a limited impact on mobile banking adoption, and income does not significantly influence usage for either mobile banking or payments. Additionally, men and younger respondents show a greater tendency to use digital lending services, with a moderate association seen among metropolitan residents.

(Angeles, 2022) The broad adoption of accessible digital financial services is anticipated to enhance capital flow among micro, small, and medium-sized enterprises (MSMEs). This study seeks to clarify the disparities in how these businesses use digital financial services. Although financial technology has increased opportunities for productivity and streamlined fund transfers, the findings offer significant insights into the apparent imbalance in how MSME owners utilize digital financial services for saving, borrowing, and investing.

## III. RESEARCH METHODOLOGY

This paper is based on the secondary data collected from the various websites, research paper and reports. The main aim of this paper is to describe the major Financial Technology Services in India. This paper describe the Key Segments of FinTech in India, Government Initiatives and Regulatory Landscape, Factors Driving Growth, Challenges, Future Prospects, Internet Banking, Mobile Banking, Digital Wallets, Unified Payments Interface (UPI), Mobile Payment Apps, Online Fund Transfer, Bill Payment Services 8. Digital Loan Services, Investment Services, Digital Insurance Services, Cardless Cash Withdrawal, Aadhaar-enabled Payment System (AePS).

## IV. RESULTS AND DISCUSSION

### 1. Key Segments of FinTech in India

Financial technology (FinTech) services in India have rapidly grown over the past decade, driven by factors like digital transformation, increased smartphone penetration, and supportive government policies. Here's an overview of the key aspects of the FinTech landscape in India:

#### 1.1 Internet Banking

Internet banking allows customers to access their bank accounts and perform various transactions online using a computer or mobile device. This service is available 24/7 and enables customers to check their account balance, transfer funds, pay bills, and more.

#### 1.2 Mobile Banking

Mobile banking enables customers to access their bank accounts and perform transactions using their mobile phones. This service can be accessed through mobile apps, SMS, or USSD.

### **1.3 Digital Wallets**

Digital wallets, such as Paytm, Google Pay, and Amazon Pay, allow customers to store their payment information and make transactions online or offline. These wallets can be used to pay bills, recharge mobile phones, and make purchases online.

### **1.4 Unified Payments Interface (UPI)**

UPI is a real-time payment system that enables customers to transfer funds between bank accounts using a unique identifier, such as a virtual payment address or a mobile number.

### **1.5 Mobile Payment Apps**

Mobile payment apps, such as BHIM, PhonePe, and WhatsApp Pay, enable customers to make transactions using their mobile phones. These apps use UPI or other payment systems to facilitate transactions.

### **1.6 Online Fund Transfer**

Online fund transfer services, such as NEFT, RTGS, and IMPS, enable customers to transfer funds from one bank account to another online.

### **1.7 Bill Payment Services**

Bill payment services, such as Bharat Bill Payment System (BBPS), enable customers to pay their utility bills, such as electricity, gas, and water bills, online.

### **1.8 Digital Loan Services**

Digital loan services, such as instant personal loans and credit card applications, enable customers to apply for loans and credit cards online.

### **1.9 Investment Services**

Digital investment services, such as online trading platforms and robo-advisory services, enable customers to invest in stocks, mutual funds, and other investment products online.

### **1.10 Digital Insurance Services**

Digital insurance services, such as online insurance premium payment and policy management, enable customers to manage their insurance policies online.

### **1.11 Cardless Cash Withdrawal**

Cardless cash withdrawal services, such as SBI's YONO Cash, enable customers to withdraw cash from ATMs without using their debit cards.

### **1.12 Aadhaar-enabled Payment System (AePS)**

AePS is a payment system that enables customers to make transactions using their Aadhaar number and biometric authentication.

### **1.13 Payments**

Digital payments, led by platforms like Unified Payments Interface (UPI), Paytm, PhonePe, and Google Pay, have revolutionized financial transactions. UPI has been particularly successful due to its real-time, low-cost transactions and interoperability across platforms.

### **1.14 Lending**

Digital lending platforms like KreditBee, MoneyTap, and Lendingkart provide faster, paperless loans for personal and business needs. These platforms use data analytics to assess credit risk, enabling them to serve underserved segments, including individuals and small businesses.

### **1.15 Wealth Management**

Platforms like Groww, Zerodha, and Paytm Money have simplified stock market and mutual fund investments for retail investors, with easy account setups and low-cost transactions.

### **1.16 Neo-Banking**

Neo-banks such as Niyoy, Jupiter, and RazorpayX operate without physical branches, offering digital-only banking services that cater to specific customer needs with a seamless user experience.

### **1.17 Blockchain and Cryptocurrency**

Although the regulatory landscape remains uncertain, interest in blockchain and cryptocurrency is growing. Platforms like WazirX and CoinSwitch Kuber have introduced crypto trading, while banks and government projects explore blockchain for secure record-keeping.

## **2. Government Initiatives and Regulatory Landscape**

### **2.1 Regulatory Sandbox**

The Reserve Bank of India (RBI) launched a regulatory sandbox for FinTech firms to experiment with new products under a controlled environment, which fosters innovation.

### **2.2 Digital India Campaign**

This initiative promotes digitization and financial inclusion. The JAM Trinity (Jan Dhan accounts, Aadhaar, and Mobile) plays a significant role in providing digital financial services to the unbanked population.

### **2.3 Startup India**

Government incentives and tax benefits encourage innovation in FinTech, aiding new startups in raising funds and scaling operations.

### **2.4 Data Protection and Privacy Regulations**

The forthcoming Data Protection Bill and evolving privacy laws aim to balance innovation with data security, a critical factor for building consumer trust in digital financial services.

## **3. Factors Driving Growth**

### **3.1 Increased Smartphone and Internet Penetration**

India's growing mobile and internet user base, coupled with affordable data, drives FinTech adoption even in remote areas.

### **3.2 Financial Inclusion**

Digital financial services have helped reach the previously unbanked population, reducing dependency on cash and providing access to credit, savings, and insurance.

### 3.3 Technological Innovations

AI, machine learning, and data analytics enable FinTech firms to personalize services, automate processes, and improve fraud detection.

### 4. Challenges

#### 4.1 Cybersecurity

With the rise in digital transactions, cybersecurity threats also increase, requiring stronger measures to protect user data.

#### 4.2 Regulatory Uncertainty

Evolving regulations, particularly concerning cryptocurrency and data privacy, create uncertainty for some segments within the FinTech sector.

#### 4.3 Financial Literacy

Low financial literacy in parts of the population can hinder the understanding and adoption of digital financial services.

### 5. Future Prospects

Expanding Role of AI and ML: AI-driven chatbots, robo-advisors, and credit scoring models will likely expand, providing users with more intuitive and accessible services.

#### 5.1 Cross-Border Expansion

With the successful implementation of models like UPI, India has begun to share its digital financial expertise with other countries, exploring opportunities in international markets.

#### 5.2 Increased Investment

Continued investor interest in the Indian FinTech space, both domestic and international, will likely fuel growth and innovation.

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